The
GORDIAN KNOT

ARTHUR T. PIERSON

The Gordian Knot

239
P6159
1902

THE GORDIAN KNOT

Or, The Problem Which Baffles Infidelity

By Arthur T. Pierson

Author of "In Christ Jesus," "The Crisis of Missions," "Miracles of Missions," "Many Infallible Proofs," "New Acts of the Apostles," etc., etc.

FUNK & WAGNALLS COMPANY
NEW YORK AND LONDON
1902

THE MASTER'S COLLEGE LIBRARY
SANTA CLARITA, CA 91321

COPYRIGHT, 1902, BY
FUNK & WAGNALLS COMPANY
Registered at Stationers' Hall, London, England
[PRINTED IN THE UNITED STATES OF AMERICA]
Published July, 1902

CONTENTS

PAGE

I The Problem Stated 7

II The Marks of Design in Creation 21

III The Mutual Fitness of Things 37

IV Evidences of Order in Creation 58

V The Perfection Seen in Minutiæ 77

VI The Problem of Life's Origin . 95

VII The Wonders in Life's Realm 109

VIII The Problem of Animal Instinct 126

IX The Problem of the Conscience 146

X The Problem of Man's Need . 162

XI The Problem of the Life Beyond 176

XII The Foresight of the Future . 191

XIII The Problem of the Book . . 208

XIV The Problem of the God Man 223

XV The Theistic Solution . . . 235

APPENDIX :

List of Helpful Books 259

Digitized by the Internet Archive
in 2024

https://archive.org/details/gordianknot0000arth

The Gordian Knot

I

THE PROBLEM STATED

It is one of the mythical legends which have crept into authentic history, that Gordius, the King of Phrygia, was originally a peasant at the plow; and that, one day, an eagle alighted on the oxen. This was regarded as an auspicious sign, prophetic of his royal destiny. The oxen and the cart became sacred; and, years after, the oracles told the Phrygians that their future king would be found in a cart. Soon afterward Gordius approached in his humble vehicle, and was forthwith declared their sovereign, the rude ox-cart being placed in the

Acropolis of Gordium and dedicated to Zeus Basileus.

The yoke was found to be connected with the pole of this cart by a mysterious tie of rope. No one could discover the secret of undoing this strange knot; and the oracles declared that he who should succeed in unraveling its mystery should prove the elect conqueror of all Asia.

Alexander the Great, 333 B.C., aspiring to such universal empire, sought to untie this "Gordian knot," and so get the prestige of the prophecy. But, baffled in every attempt, and wholly unable to loosen the rope, he boldly drew his sword from its scabbard and with one impatient blow severed its strands, claiming that, by cutting the knot, he had untied it.

One great enigma has for many centuries confronted the human race and challenged its sages to suggest a solution. It is the all-comprehensive problem of the Universe, and of how it came to be; of Man, his origin, character, and destiny. This is not only a curious enigma, but manifold, intricate, and complicated with many other questions which also demand an answer. Like the wheel within a wheel which Ezekiel saw, it includes many absorbing matters of inquiry. Who made all things? What is man? Whence did he come? All this raises the question of a Creator. Is there a God? and, if so, may He be known, and how? and what is man's relation to Him and His attitude toward man? Man is undoubtedly a sinner. Whence came the law he has violated, and the conscience that is his accuser? Is there a universal Court before which he must appear? Is sin hopeless and permanent, or may it be forgiven and cleansed? If pardon is possible, where is the fountain of cleansing, and what are the conditions of a changed life?

There is moral ruin: is there moral rescue? Then comes the question not of the whence, only, but of the whither? Death is an undoubted, universal fact. Is death the end of all, or the doorway to another life? And, if there be a life beyond, what is man's condition beyond the dark door?

To settle such questions satisfactorily and finally is all important, for thus will be adjusted a thousand minor matters. Man will be shown his true self, his highest interest, his duty to himself, his fellow man, and his God. Every ethical question waits for its last, complete answer, until this worse than Gordian knot is untied; and the common sense of mankind consents and decrees that, if any system of teaching can supply a perfect solution of this complicated problem, it shall be entitled to the crown and the throne; and that such a religion shall be the elect conqueror of the world, compelling universal homage.

Many have been the competitors for this royal dignity, and infidelity, both ancient and modern, has put in a claim. But in vain has it sought to untie the Gordian knot. In various ways and forms skepticism has confronted the material mystery of the universe and the moral problems of the race, but so far has failed to bring to man any real help or even hope. In fact, it would seem as tho, in despair of untying the knotty problem, infidelity rather resorts to cutting it. Sometimes ridicule of all proposed solutions is the sharp sword used—a weapon that can not be met by argument, because it does not argue and therefore is unanswerable by logic. Sometimes the weapon chosen is that negation that is destructive but never constructive. But surely we do not solve a problem by laughing at the attempts of others to solve it, nor do we destroy or abolish a difficulty by denying its existence. Sophistry may play the magician, and, as he makes our eyes the fools of our other senses, may make our reason the dupe of a fallacy; but men can never be at rest in a falsehood; nothing is ever settled till it is settled rightly and truly. Sooner or later the magician's spell will be broken and the eyes of the reason be unveiled. Nor can men be satisfied with mere denials or doubts. Like Goethe, they will cry, "Give us your convictions! As for doubts, we have enough of our own already!" Faith may sometimes foolishly run into the extreme of credulity; but even credulous faith is better than universal doubt, and that is a fatal process of undermining superstition which leaves a man not only destitute of belief but incapable of faith! That is like correcting a distorted vision by searing the eyeball into blindness.

The purpose of this little treatise is not controversy but candor, not to hinder but to help, not to maintain any position for its own sake but for the sake of the truth and the truth-seeker. The writer would conduct his examination with the calmness and coolness of a scientific investigation rather than with the heat and excitement of a war of words or a contest in debate. The question now to be considered is, whether infidelity answers the inquiries of the human soul on the gravest matters, or leaves us in the midnight darkness where we most need light. Does it give us a practical solution for the problems of creation, human history, and heart yearnings?

We may anticipate by remarking that there is one, among the so-called "religions" of the race, that claims supremacy, and whose claims to such superiority are conceded, even by those who deny its supernatural origin. It offers a solution to all the great problems hitherto mentioned. It affirms a universal Sovereign, Creator of all worlds and of all creatures, who is also a Supreme Lawgiver and final Judge. It offers a Book which it affirms is fitted to be the ultimate authority in matters of doctrine and duty. It presents a Savior for man's sin, and a means of pardon and salvation. It brings to light man's immortality beyond the grave. We shall ask the reader of these pages, in the same calm, candid, scientific spirit, to examine whether this religion of Christ be not more satisfactory and helpful to the reason and conscience than the infidel systems which scout its claims, but supply nothing in its place but agnostic doubts.

A definition of terms is always in place at the outset of a discussion.

We shall use the word "unbelief" as the opposite of "faith," and "disbelief" as the opposite of "belief," and "infidelity" as a general term for both unbelief and disbelief, in their crystallized form as a denial of the essential truths affirmed by Christianity. The word "infidelity" is commonly applied to a vague or a definite rejection of Christianity as a divine and supernatural revelation. But it often means more, including the denial of the spirituality of God, as in materialism; the personality of God, as in pantheism and deism; the unity of God, as in polytheism; or even the existence of God, as in atheism.

It is difficult to apply scientific and rational tests to what is so evasive in substance and varied in form. Infidelity lacks system. It is indefinite and elusive. It consists, mainly, not of positions, or positive teachings, but of negations, or negative statements. It is as varied in form as are the shades of mental opinion, and lacks all coherence and consistency. But we shall undertake to apply to it two great tests: the tests of reason and of experience. We shall ask what teachings are most rational on the one hand, and on the other most correspondent with the voice of human consciousness and the witness of human history.

Doubt, as to moral and religious truth, abounds especially in this age. Men drink it in through a hundred channels—books and papers, public utterances and private converse. They breathe it in the very air. It is of the nature of doubt to grow fast, to reach full stature quickly and then dare boldly to disbelieve and deny all that has been taught as true. Often, like Talus, with his iron flail, doubt goes about, demolishing whatever others hold precious as faith; and so it often occurs that, while preachers are discussing the teachings of the Bible, the work of Christ, and the duty of the Church, many, even among their hearers, are questioning whether the Bible is an inspired book, whether Christ is a divine Savior, or perhaps whether there be any God at all, or any future life.

We fear that there is much skepticism that is not candid, or even honest. With those who are taking refuge from a guilty and accusing conscience in denying that there is a God, a hereafter, or even a soul, these pages are not concerned. Where a moral motive exists for one's doubts, no mere scientific arguments or intellectual proofs will reach the case; the remedy must be a moral remedy. The heart, not the head, is at fault in such a case, and blind eyes are not cured by an operation on the ears. Argument is useless so long as there is a cavilling spirit. If one is not willing to be convinced, and therefore shrinks from the light of truth which brings rebuke, his mind, as Dr. Holmes so well said, "is like the pupil of the eye: the more light that is poured upon it, the more it contracts." Our appeal is to those who have been entangled in skeptical opinion, but who are honestly searching for truth; and for all such we are confident that there are ample sources of rational and intelligent conviction. There are ways of reaching satisfactory and final conclusions as to the being and character of God, the origin, nature, and destiny of man, the claims of the Christian faith, and all those related truths that belong in the grand structure of a complete system of re-religious belief. Of those ways of reaching truth we are in search.

There is the more reason for trying to help an honest doubter, because he is not at rest in the region of doubt.

Skepticism is a restless sea, on which any one who sails is tossed up and down and driven to and fro in endless uncertainty. There is no solid ground on which to stand until something true is found and believed. They who pull down our faith should build up something better; for man is a "religious animal" and needs a religion. It is fair to ask for some better book if we are to give up the Bible, and for some better Savior if we are to abandon Jesus Christ. The theistic theory may not satisfy some men, but they can not be content with a chaos of absurdities, a mere jumble of conflicting and contradictory notions, in its place. It is scarcely sane to scout one theory for supposed lack of proof, only to accept other unproven theories instead. Napoleon once said to skeptical officers who were about him: "You, gentlemen, seem to make amends for not believing in Christianity by making haste to believe everything else.'' If faith sometimes runs into credulity, what about the credulity of incredulity! The folly of believing too much is not so great as the folly of believing too little. Some doubters imitate the Eastern dervish, who, bidden to search in a river-bed for the philosopher's stone, got into the habit of throwing away whatever he picked up, and so flung away the priceless treasure even when he had it in his hand.

II

THE MARKS OF DESIGN IN CREATION

ONE of the first questions confronting us is this: Does any system of Infidelity adequately answer *the Argument from Design in creation?*

Among the sources of knowledge must be prominently reckoned the Senses and the Reason: the Senses as the tools, used in experience and observation; the Reason as the higher faculty, used in reflection and inference, to reach conclusions, whether by methods inductive or deductive. By the Senses and the Reason jointly is constructed scientific and rational argument.

The Argument from Design, simply

and briefly stated, is this: Reason insists on an adequate cause for the products which appear in the created universe—a cause sufficient and efficient, final and personal, adequate to account for these as effects.

It does not suffice to trace an effect to its immediate cause, if that cause is itself an effect of some remoter cause, further back in the series. A river is not accounted for by being traced back to its tributaries; the tributaries themselves must be traced back to the rivulets and rills, and these to the springs and the rains; and back, even of the rains, there lies the mystery of water—evaporation, condensation, the cloud, the atmosphere, the falling shower—and only when that ultimate mystery has been solved, is reached the final explanation of the river that poured its flood into the sea. The mighty stream is composed of rain-drops, and each rain-drop is itself a little world, demanding an adequate cause.

The mystery of a chain is not accounted for, tho link is traced back to link until the final link is found and every link has been counted from staple to staple. No more is creation explained by showing that life exists, develops, and propagates itself. The final question still remains, "Whence came Life at first, and what is Life?" To stop short of this is to repeat the folly of the Hindu cosmogony, which supports the vast earth-plain on elephants' heads, and the elephants on a huge tortoise, and the tortoise on a great serpent coil, and the serpent on —nothing.

To the human Reason the philosophy of atheism can never be satisfactory. A creation without a Creator seems a mystery far greater than a creation *with* a Creator. One mystery is not escaped by thus running for refuge into another and a greater. A product demands a producer: something made argues a maker; and any other position seems, to him who calmly reasons, untenable, inconsistent, unphilosophical, and even unscientific—an absurdity. On the other hand, that conception of the universe which puts behind this universal thought an Infinite Thinker, commends itself to the common sense of mankind as reasonable and satisfactory. It bears, at least, the outward semblance of truth: such explanation consists with the facts, whatever mystery may yet remain unsolved. To the unbiased human understanding this offers the only reasonable resting-place.

The Argument from Design starts with an affirmation so simple that it is hard to find any sensible and solid ground for disputing it. It is this: *The work shows the workman.*

The most thoughtless observer is at times impressed with the magnitude and magnificence of Creation.

The massive dome of St. Peter's fane, rising four hundred feet and ablaze with the masterpieces of Italian art, declares an architect and artist—some one who planned, builded, decorated it. This is a thought in stone, and tells of a thinker. It did not grow of itself, or come to be by some mysterious "evolution" or "development." Atoms never could arrange themselves in such harmonious relations, or fall accidentally into such marvelous combinations. Blind chance never built that cathedral in Rome! There must have been a controlling intelligence—an intelligent control. Yet some would have us believe that the vaster Dome of Heaven, with its millions of starry lamps, surmounting a grander Temple of Creation, had neither Architect to plan nor Builder

THE MASTER'S COLLEGE LIBRARY
SANTA CLARITA, CA 91321

to construct! Surely, it was a calm student of science as well as a devout psalmist who exclaimed:

"The Heavens declare the Glory of God!
And the Firmament sheweth His Handiwork!"

The author of the epistle to the Hebrews indulged no mere poetic rhapsody when he wrote:

"Every House is builded by some one:
But He that built all things is God."

Francis Bacon did not step beyond the bounds of a rational philosophy in declaring: "I would rather believe all the fables of the legend Thalmud and Alcoran than that this universal frame is without mind."

The thoughtful observer must feel that in these heavens there is not only a testimony to a Creator, but a partial revelation of His character and attributes. Such a work and workmanship not only reveals a workman, but hints what sort of a workman He is.

For example, as no bounds have ever been found to the universe, it is natural to infer an *Infinite* Creator. The vast periods, disclosed by astronomy, suggest His eternity, and led the Persian magi to call Him *zeruane akerene* (time without bounds). The forces of the universe, displaying stupendous power, bespeak His omnipotence. Waste, everywhere going on and needing perpetual resupply, demands omnipresence. The exact proportion and wise adaptation of every part to every other, and of all to the great whole, tell of omniscience, which includes both infinite knowledge and wisdom. The Being who survives and guides all the changes of this universe must Himself be unchangeable, immutable; and He who lavishes upon His work such wealth of splendor and variety of beauty must be both infinitely rich in resources and versatile in invention. So, also, the universal harmony, by which the whole mechanism is regulated, indicates a character of infinite perfection, in harmony with itself.

Thus, seen from no higher point of view than the scientific and philosophic, the dome of the sky bears, wrought on its expanse, in starry mosaics, "*There is a God;*" and, if this be the witness of one science, astronomy, to the Being and Attributes of the Creator, how conclusive the witness of all the sciences combined!

The devout poet of the Psalms found another evidence of God in the recurrence of the seasons. As he gazed on the earth, in the springtime, and watched the bursting bud and blossom, and beheld the autumnal swell of ripening fruit, he looked up and said:

"Thou renewest the face of the earth." *

---

* Psalms, civ: 30.

In this renewal of nature is an argument, inaudible but irresistible, for the existence of a Supreme Being—the "Divine Thou." How many problems creative wisdom confronted in securing this result! The sun must be at an exact distance from the earth to supply the precise amount of light, heat, and actinic force. Its bulk exceeds that of twelve hundred thousand earths, and it would require over eighteen and a half million tons of coal every hour to produce the heat which it radiates. Who was it that fixed that glowing orb ninety-two and a half millions of miles from the earth, so that neither the heat nor the cold on the earth's surface is insufferable? Did chance locate the sun at the very point needful in space? The earth's axis is not parallel to that of the sun, but tilted to an angle of twenty-three and a half degrees. In one-half year the earth's orbit is above, and, in the

[illegible]

other half, below the plane of the ecliptic. Hence the changing seasons —not one uniform season the year round, with half the earth in perpetual light and heat, and the other half in perpetual darkness and cold; but such variety as conduces to beauty, fertility, and human well-being, making the earth both habitable and agreeable.

"The dominant color in this renewal of the earth is green. Creative benevolence is seen in this. Were it red, it would irritate the nerves to the verge of madness. Were it blue or yellow—blue leaves and yellow grass —our stability would be endangered, and in our less controlled excitability we should go from one extreme to another. White would inflict misery like snow-blindness." * Black would spread over our minds, as over nature, a pall of gloom. As Hans Christian Andersen makes the hen say to her

---

* Rev. James Ellis.

brood, "Green is good for the eyes"; it is soothing, quieting, calming; and this soft color provides the best background from which to display the rich hues and tints of a variegated landscape, and project the strongly contrasted colors of flowers and fruits, just as the mild blue of the sky sets forth the glories of the dawn and aids the luster of the dying day.

The writer, whose words have already been quoted, further says:

"But the green speaks another argument, as, while all decay, combustion, and the breathing of all animals is using up the vital oxygen, and replacing it in the atmosphere with the poisonous carbon-dioxide, the green (chlorophyll) in the leaves and grasses, as the sun shines on it, constantly is at work absorbing the carbon and giving back the oxygen of the gas to the air again. Is that a fortunate accident? When the carbon-dioxide in the air is absorbed by the rain as it falls, making it acid, and so, in the soil making insoluble substances soluble, and so root-feeding, is the power that water has to absorb this gas an accident, contributing to the renewal of nature? or, once more, in repeating the text, shall we put the emphasis on the first word and say, 'THOU renewest'?"

But how does God renew the face of the earth?

"Would you like an introduction to His workmen? Here they are—Flies, Insects, Butterflies, Bees, Wasps, and, not least, the Wind, fructifying the pistils of flowers with the pollen gathered from the stamens. The gardener sometimes with his brush does it in some rare flower. But how could man do it all? and yet of what use would the seed be without it? Some have said that the flowers are formed beautiful, and perfumed and honeyed to attract the insects. Here is the Frost slaying the leaves for manure, the Chariot-Winds carrying to the earth, the Rain decomposing them, the Worms covering them, so preventing the escape of nutritive gases and salts. The frost is again at work, peeling the surfaces of stones, making insoluble elements soluble. Now it is splitting up the hard ground by its sudden expansion of water in freezing it, and plumbing it with the after-help of the sunshine. Now it is at work killing the grub—so that a very severe winter means a wonderful supply in the next harvest. Rains to moisten, winds to dry (the great work of the east wind is to dry the ground, and keep back buds that otherwise would be killed by April frosts), birds to devour the grub and insect, sunshine quivering the ether over millions upon millions of miles to cause to germinate and grow—so much sunshine

—so much rain—a Divine fitness of things—and the result—the renewal of the earth.

"What a variety of workers! What a diversity of operations! Some doing hard and some easy work, some pleasant and some unpleasant work, some works very beautiful (who has not admired the stars of frost?) and some with little beauty, as worms and grubs—but it is the same Spirit of Life working all in all. What wouldest thou do if God withdrew any of them? Learn the parable, for the same, or similar laws, are in two spheres of operations. As Drummond says, 'There is natural law in the spiritual world,' and tho we be as diverse as the thunder-rain and the dew, the silent lightning and the deafening thunder, as the east wind and the summer's south breezes, as spring and autumn, as frost and sunshine, as the withered leaf, and worm, and bird, and bee—

God has a place, a work, and a reward for each."

> "God hath made man upright:
> But they have sought out many inventions."*

What shows more absurdity and perversity in human nature than the many inventions by which skeptical minds seek to get rid of a Creator and banish Him from His creation?—admitting natural forces but denying all supernatural control — gigantic steeds, yoked to a huge chariot, and pursuing a fixed path, with no hand on the reins!

Here is an effect: is there no cause? Here is workmanship: is there no workman? To declare all this to be the result of accident, the work of Chance—"a fortuitous concourse of atoms"—to affirm that Force is a sufficient cause, that Matter is selfexistent and eternal, or that all this symmetry and order and beauty come from the "reign of Law"—this is mere evasion. It is scientific fallacy and sophistry, if not jugglery. It is giving to "Chance," "Force," "Matter," "Law," or whatever be its name, the attributes of Deity! A vague something is virtually erected into a god, and invested with those qualities and characteristics which can only be conceived as belonging to *being*. Attributes, such as pertain only to a person, demand a Personality. Lyman Beecher must have had some such wild and senseless philosophy in mind when he told of a little negro boy crying violently because, as he said, he "*couldn't find nowhere!*"

---

* Eccles., vii: 29.

III

THE MUTUAL FITNESS OF THINGS

THE Argument from Design admits a much wider scope than is usually given to it, and includes the entire adaptation of the creation to its purposes.

Outside of, and independent of, the plant or animal itself, there is found proof of a designing and adjusting mind—a creative intelligence—as, for example, in this mutual adaptation and preadaptation of the various parts to each other, and of all to their sphere of existence, activity, and service.

In examining this wide and varied adaptedness, it may be well to begin with the commonest substances, usually called the "elements," such as air and water.

Atmospheric air is made up of about seventy-seven parts of nitrogen and twenty-three of oxygen—two gases mixed but not chemically combined—together with about six-hundredths of one part of carbonic acid gas. Atmospheric air is of such specific gravity as to float watery vapor, and carry the fragrance of flowers and other volatile matter.

One law of nature appears to be that, when two gases of different weight or specific gravity are mixed together, they do not remain separate, like fluids of different densities, but diffuse themselves uniformly throughout the whole space which both occupy. Two beneficent consequences follow. First, there is *dilution* of what would otherwise be unpleasant and hurtful, as when a noxious vapor, arising by its own elasticity from a volatile substance, mingles with the surrounding atmosphere, until its effects become practically annulled, and its presence practically imperceptible to the sense of sight or smell. Secondly, there is *diffusion* of what is wholesome and agreeable, as of pleasurable odors and health-giving properties.

These are but a few of the singular adaptations of the atmosphere to its office. To this gaseous element which envelops the earth are due the possibility of vegetable and animal life, the modifying and retaining of solar heat, the transmission of sound, the gradual transition of day into night; and reversely, the disintegration of rocks, and the recurrence of all weather phenomena. To the varying density in the strata of the atmosphere are due the rising of vapors, the floating of clouds, with all the picturesque cloud scenery and useful cloud effects.

The weight of the atmosphere exposes a man of ordinary stature to a pressure of about fourteen tons; yet, as the air permeates the whole body and by its peculiar nature presses equally in all directions, all inconvenience is prevented; and the experiments of the brothers Weber in Germany showed that the heads of the thigh and arm bones are kept in their sockets by atmospheric pressure.*

In water similar benevolent provision and wise adaptation are seen. There are billions of tons of this liquid. The great reservoirs of it in the ocean bed are so salted as to keep it perfectly pure, yet not so impregnated with saline properties as to destroy the lives of the countless living creatures and plants found within its domain. Into the ocean bed all the rivers pour their floods, and yet provision is made in winds and tides for endless action and agitation so that the sea is not made pestilential by stagnation. From the great expanse of the ocean, by evaporation, all lands are provided with pure, sweet water which, falling from the clouds, washes impurities from the air as it falls; and yet evaporation is so regulated as to leave behind all the salts which the water holds in solution in the sea-bed. Thus the face of Nature is perpetually refreshed, and the surplus of moisture, filtered by percolating through various strata of soil, with its salts and sands and mineral deposits, is both kept fresh and cool and sweet for drink, and is impregnated with valuable medicinal properties so as to become a healing agent. Man could not long survive without water. It forms a large element in the composition of the body. When cold it acts as a tonic, when lukewarm as an emetic, when warm as a laxative, when hot as a stimulant, while as a purifier it has no equal.*

---

* International Encyclopedia.

Thus the source of all terrestrial

---

* Compare "Plumer on the Psalms," 648.

flowing waters is the ocean. By the action of sunlight and air upon its surface a part of this liquid mass is constantly rising into the air in the form of vapor, which again descends, condensed into dew and mist, rain and snow. These combine to replenish springs and rivers, which again replenish the ocean, whence they came, keeping up an endless circuit and insuring a perpetual circulation. "All the rivers run into the sea, yet the sea is not full," for the quantity of water evaporated exactly equals the quantity condensed and returning into its vast bosom. Evaporation provides pure water, the showers and rains help provide pure air, and the rills and rivers as they run sweep other impurities into the sea. If these impurities remained stagnant in pools, they would breed disease; if there were no evaporation from the sea, we should have nothing but salt water to drink. There is a provision made for perpetual motion. What is corrupted by contact with the earth is again purified by rising to heaven, coming down to earth again in pure distillations.*

It is a hydrostatic law that solids which are heavier than liquids, bulk for bulk, will sink in them. Note the apparent exceptions: a fine sewing-needle, slightly greased, will float, tho heavier, bulk for bulk, than the water. The feet of insects have a capillary repulsion for the water; hence instead of sinking in it they make depressions—for if the surface of a body repel a liquid, such a body, tho heavier, may float.†

As in air, so in water; the principle of the equal transmission of pressure by liquids enables fishes to bear a very great pressure of water without being crushed, the fluids within pressing outward with as great force as the surrounding liquid presses inward.*

---

* Wells's Philosophy, 119. † Ibid., 145.

It is a law that heat expands and cold contracts, and to this law the one exception, very marked, is *water.*

Heat this to the boiling-point and it expands ; let it cool and it contracts steadily until it reaches 40° F., when it reaches its maximum of density. Now, if subjected to still lower temperature, instead of continuing to contract it begins to expand till, at 32° F., or even below, it dilates so conspicuously in freezing that its expansive and explosive force is as irresistible as in boiling.

Now is there no intelligence at the bottom of this very marked exception? Look at the disastrous consequences which must otherwise follow. Should water continue to contract as temperature lowered, as soon as a layer of ice formed it would sink ; successive layers would form and sink, till rivers and lakes would turn to a mass of ice; one severe winter would suffice to destroy all water animals, and no summer sun could melt the mass—there would be simply a shallow body of water over an eternal bed of ice. But God's wisdom decreed that water should expand below 40°, and so the ice floats and sheets the water and protects the life beneath.*

---

* Wells's Philosophy, 126.

Those who study the human body are prepared to understand why the psalmist wrote, "I am fearfully and wonderfully made." For instance, the human hand was obviously meant to be the servant of the entire body. It is put at the extremity of the arm, and the arm is about half the length of the body, and, as the body can bend almost double, the hand can reach any part of it. The hand is at the end of an arm having three joints, one at the shoulder, one at the elbow, one at the wrist, and each joint made on a different pattern so as to secure together every conceivable motion—up and down, sidewise, backward and forward, and rotary. The hand is made with four fingers and an opposing thumb, which secures a double leverage, without which no implement or instrument could be securely grasped, held, or wielded ; and so strangely are the fingers moulded of unequal lengths that they exactly touch tips over a spherical surface, such as a ball or the round handle of a tool.

---

* Dr. Golding Bird. See Wythe, "Science and Revelation," 163.

There are two hands—opposite and apposite to each other in position and construction, so that they exactly fit each other and work together without interference, making possible by joint action what neither could accomplish alone. Montaigne, referring to one only of the hand's many capacities—

gesture—says: "With the hand we demand, promise, call, dismiss, entreat, deny, encourage, accuse, acquit, defy, flatter, and indicate silence; and with a variety and multiplication that almost keep pace with the tongue." The hand is so strikingly capable of being used to express conceptions and execute designs that it has been called "the intellectual member."

The human eye is perfect in structure and equally perfect in adaptation. It is placed in the head, like a window just under the dome, to enable us to see farthest; placed in front, because we habitually move forward; shielded in a socket of bone, for protection to its delicate structure, yet protected from that socket by a soft cushion; provided with six sets of muscles, to turn it in every direction; with lids and lashes, to moisten, shut it in, protect it and soothe it; with tear duct, to conduct away excess of moisture; and having that exact shape —the only one of all that might have been given—to secure distinct vision by refracting all rays of light to a single surface, which is known in science as the ellipsoid of revolution.*

By a wonderful arrangement of iris and pupil it at once adapts itself to near or far objects of vision and to mild or intense rays of light, and, most wonderful of all, the human eye is "provided in some inscrutable manner with the means of expressing the mind itself so that one may look into its crystal depths and see intellectuality and scorn and wrath and love and almost every spiritual state and action." †

The ear is another example of skilled workmanship. It consists, first, of a funnel-shaped mouth, placed on the external surface of the head, and which, in animals, is movable, so that they can direct it toward the place whence the sound comes. Proceeding inward, there is a tube, terminating in an oval opening, across which is an elastic membrane—the "*drum*" or *tympanum*. Sound makes this vibrate. To secure to it free motion the Eustachian tube affords communication with the air contained behind the drum. The vibrations are conveyed inward by a curious intricate structure, the labyrinth—a chain of four minute bones, from the center of the membrane to the inner compartment containing the auditory nerves, connecting the drum with the labyrinth.*

---

* "Pater Mundi," Dr. E. F. Burr, p. 170.

† Ibid., 172.

The human body has three departments of life which, following Dr. Sperry's classification, may be given in the biological order of importance, the order also of development. 1. Nutritive, including all processes by

---

"Pater Mundi," 223.

which the waste of the body is supplied. 2. Muscular or motor, including all that has to do with its motion or locomotion. 3. Neural or nervous, including all that pertains to the perception of the senses and the action of the brain. And these three departments curiously correspond to the three departments of man's invisible self—sensibilities, will, intellect.

The adaptations of the human body are countless, and the more research penetrates to the very arcanum of physiology the more manifold and mysterious these adaptations are seen to be.

For example, the human body is peculiarly fitted to bear *hot air*. Sir Jos. Banks entered an oven 52° above boiling-point. Workmen, in the manufacture of plaster of Paris moulds, sometimes enter ovens 100° above the temperature of boiling water. Yet eggs or beefsteak would be cooked in such an air, and to touch metal thus heated would burn. *

The processes of life in the human body are complex and marvelous. There are several important forms of activity, distinct, yet strangely connected : respiration, circulation, digestion, perspiration, nerve action. Each is a study in itself, wonderful in design, yet most so in their mutual adjustment, like the wheels of a watch, where the little cogs play into each other with the perfection of mechanism. The teeth prepare food for the stomach, some simply cutting or tearing it, the others thoroughly grinding and reducing it to pulp. The stomach prepares it for the blood; the lungs purify the blood, throwing out hurtful elements and taking in those which invigorate; the heart drives the pure blood to the remotest extremities through the arteries, and draws it

---

* "Pater Mundi," 249.

back through the veins when it has deposited its life-sustaining virtues and needs to be reinvigorated by contact with the oxygen of the atmosphere.

Let us look at a few examples of preadaptation.

While the caterpillar is as yet in the chrysalis state, if its outer covering be carefully removed, there will be found, neatly and compactly folded up beneath the skin, every part of the future butterfly or moth—legs, wings, antennæ—all foretelling the final consummation of that metamorphosis—the transformation which lifts the crawling worm to a winged creature, and changes its whole manner of existence. This preadaptation can not be the result of a purpose on the part of the animal or of "conformity to its environment," for the caterpillar could not foresee its mysterious future, having, as a caterpillar, no experience of such new conditions. It never saw the golden-winged creature which laid the egg from which it came, for the mother died before its offspring was hatched. Some superior and supreme Creative Intelligence must therefore have been at work within the cocoon, and moving the blind machinery of nature, to fit the pupa for the imago, or perfect insect, which was afterward to emerge from its shell and feed on different food and live a new and strange life.

Both adaptation and preadaptation find illustration in the camel, that "ship of the desert," which appears to have been nearly if not absolutely the first animal used in the service of man, and singularly fitted for long marches, heavy loads, and such scanty forage and water as arid regions can furnish.

Mr. William J. Broderip, the writer on zoology, remarks that, "viewed with the eye of even a comparatively careless observer, the camel presents one of the most complete instances of design with relation to human wants. There is not a part of its structure, from the bony framework of its skeleton to the external hair of its coat, that could be omitted without injury to the wonderful work, or improved. Those very parts which seem deformities are absolutely necessary to its well-being and destination, and the hump and callosities become beauties when examined with reference to the exigencies of the animal and its condition as the slave of man."

The hump and callosities are especially worthy of attention as manifestly meant to adapt this curious animal for service to man. The callosities, seven in number, sustain the heavy weight and pressure of the body when the animal kneels to receive his burden and rises up to begin his journey. They can not well be the result of the camel's experience, for otherwise the callosities would not be found on a newly born camel, any more than tight shoes on the parent would cause corns on the toes and feet of the new-born infant. Whether we look at the grotesque figure or investigate the internal structure of this animal, unmistakable proof confronts us that the Great Author of its being who called it to a certain state of life and career of service, with infinite foresight and wisdom, fitted it beforehand for its exact sphere. Born for the desert, the callosities prevent the skin from cracking at those points where the whole weight of the beast rests upon the dry, hot sands. And so the strong, nipperlike upper incisor teeth are fit instruments for cutting through the tough plants and shrubs such as are found in desert wastes. The nostrils are so organized as to close against the sand-drifts. The stomach is so well adapted to coarse fare that the camel can not only digest but relishes pasture that no horse would crop. If there be but scant supply even of this sort of food, he absorbs the fat of his hump, and if for days he finds no water, he subsists on the liquid stored in the remarkable water-tanks with which he is supplied. Broderip found also that, altho the cavity peculiar to the camel may not properly be called a fifth stomach, and is used as a receptacle for remasticated food, it yet contains a system of cells fitted to contain water, and provided with a reticulated apparatus for closing those cells while the dry food is in the water-bag; and water thus obtained from a camel's belly after death has been strained and used to quench the thirst of an almost perishing caravan. Major Wayne testifies to the hump as one of the most wonderful adaptations of Almighty power and wisdom found in all animal life. "Composed of gelatinous fat, it contributes a stock of provision that by reabsorption furnishes the animal with sustenance when otherwise deprived of food sufficient for its exertions; and, after a long journey, the hump sometimes is scarcely traceable. We further observe how plainly this animal is fitted not for draft but for burdens, the deep chest and strong fore legs enabling it to bear a load, while the narrow loins and long, ungainly legs leave it without the force needful for a longitudinal strain; and the additional joint in the hind legs enables it to kneel down in a position specially fitted for the packing of burdens on the back and then for rising and lifting them."* Who can study this animal and fail to see marks, not only of a Creator mind, but of a benevolent purpose?

---

* Appleton's Encyclopædia. Article, "Camel."

IV

EVIDENCES OF ORDER IN CREATION

ORDER is Heaven's first law," writes Dr. McCosh; "and the second is like unto it, that everything serves an end. This is the sum of all Science. These are the two mites, even all that she hath, which she throws into the treasury of the Lord; and, as she does so in faith, Eternal Wisdom looks on and commends the deed." *

In the material creation two great principles prevail: that of universal order, and that of special adaptation. First, there is a general plan, pattern, or type to which everything is made to conform; and, secondly, there is a particular end, everything, however minute, being accommodated to its

---

* "Typical Forms in Creation," McCosh, p. 30.

place and fitted to its sphere and purpose. These principles, tho most conspicuous in the highest spheres—the human and animal — find abundant illustrations also in the vegetable world, and even in the inorganic kingdom. These principles, which pervade the cosmos, plainly indicate *intelligence*, for they both proceed from and are addressed to a being capable of thought.

Human workmanship at once strikes men, both as evidence of an intelligent mind and skilful hand, and as proof of such workman's having had in mind purchasers and patrons who could appreciate his art. For example, examination of a watch shows that the constructor of that delicate machine understood metals and gems and the use of tools, and had in view a certain idea or image of a timepiece. These are evidences of order. But we also discover that he made the watch to attract the beholder and make him desire it as his own possession. Consequently, it is made to indicate the time accurately; but it is made also to minister to esthetic tastes, and consequently it is small, easy to carry, ornamental, and in every way attractive to the eye and convenient for the wearer. This evinces special adaptation. No one doubts either that a skilful workman made it or that he made it for intelligent purchasers.

It seems incredible that any one can contemplate the universal machine, with its consummate order and special adaptation, and not see that it bears the stamp of MIND, and is meant to be appreciated by mind, to appeal to intelligence and refinement, and to that taste for the symmetrical and beautiful, which is one of the highest endowments of an intelligent being.

It takes no unusual intelligence to

find, running through nature as a whole, and through all its parts, a beautiful regularity. Language, even among ancient peoples, is a confession of this. The Greek word "*Cosmos*" means "order" and "beauty"; the Latin word "*Mundus*" means "adorned"; and these words have an intellectual and ethical value as conveying man's impressions of the universe, even in comparatively primitive times. This order and ornament appear in four main departments—*number*, *time*, *color*, and *form*.

Kepler discovered, in the beginning of the seventeenth century, and, after twenty-two years of incessant study and experiment, his three planetary laws: that the planets move in an elliptical orbit; that there is exact correspondence between areas and times; and that the square of the periodic time is proportional to the cube of the mean distance. Here proportion in both form and number is revealed, and in the realm of inorganic matter. Sir Isaac Newton likewise found that the law of gravitation is a law of numbers. Gay-Lussac discovered an arithmetical law, regulating the combination of gaseous substances; and Sir John Herschel declares chemistry to be preeminently the science of quantity.

The digits of all vertebrate animals, like man's fingers and toes, are ten in number. In mammalia, seven is the number of vertebræ in the neck, from the whale to the giraffe. Among plants, in the lowest division multiples of two are characteristic; in the next highest, multiples of three, and, in the highest, multiples of five. Still more complicated numerical systems govern the arrangement of the leaf appendages, and, in particular, of leaves and scales on the cones of pines and firs. So, in the inflorescence of plants, there is a fixed relation between sepals, petals and stamens, which can not be the work of chance. There is an octave of colors—violet, indigo, blue, green, yellow, orange, and red—in the spectrum, and an octave of sounds in the full musical scale. This numerical arrangement of the universe evidences a mathematical Mind, back of the system, and, it would seem, could in no other way be accounted for. Chance does not work with mathematical order and precision; but, because it is chance, it works irregularly and unsystematically: the very idea of chance precludes uniformity and regularity.

There is an order also of *Time.* Planetary and starry worlds, and even the irregular comets, are governed by fixed periods. Geology discloses epochs in creation. Magnetic variations seem to be periodical and to bear some relation to a regular recurrence of sun-spots. The development of embryonic life, the changing seasons, the periods of growth and efflorescence in plant life—all have impressed on them a law of periodicity and regularity. Even disease obeys this law, as in the duration of fevers. Man has been called an "eight-day clock." The periods of seven years mark his whole existence: from the first seven, to puberty, the second ; to full manhood, the third ; and to threescore and ten, the tenth seven.

There is an order also in *Color.* Harvey classified some tribes of algæ according to color, and Berkeley arranged some fungi according to the color of their seeds. The two primary colors, blue and red, are seldom if ever found on the same organ or in contact with the same plant. The distribution of colors in the vegetable kingdom is in accordance with the well-known canons of art, as to the laws of color harmony, and especially of complementary colors. Even the plumage of birds, the decorations of insects, and the spots and stripes of wild beasts exhibit conformity to the same laws. It is no accident that the sky is blue, the clouds white, the earth brown, and the grass green. In the art world seven colorists have been accorded the highest rank : Raphael, Leonardo de Vinci, Titian, Corregio, Paul Veronese, Rubens, and Van Dyck. Yet in the natural world there is proof of some Artist having been at work who infinitely more than they has understood the laws of artistic coloring and who makes no mistake.

"God has employed certain colors in His creation," says Ruskin, "as the unvarying accompaniment of all that is purest, most innocent, and most precious; while, for things precious only for material uses, or dangerous, common colors are reserved." It seems as tho "Nature were meant to be," as another remarks, "one of the meeting-places of God and man. The forms and actions of Nature are the vernacular both of man and God; and so man and God meet at that point and understand each other."

Thus studied, the natural universe becomes a palace and a temple—a palace, where an invisible King dwells and is enthroned, and waits to commune with His loyal subjects; a temple, where an infinite Creator is enshrined, and by His very glories challenges the worship of all intelligent beings as creatures of His power.

The order in nature, as to *Form*, is likewise noticeable. Form is a word inclusive of structure, figure, and proportion. The orbs in the sky are spheres or spheroids, and their orbits, ellipses. Astronomy as a science embraces geometry, trigonometry, and conic sections. The curve known as the spiral pervades the universe—alike in the recurrence of plant buds, leaves, and branches, and in the movements of gigantic spheres above us as they sweep through space.

Form, in the mineral kingdom, not only abounds, but determines largely the exquisite beauty therein found. Crystalline symmetry, often very complex, is lavished on the commonest mineral and metallic substances, and by the peculiarity of its crystals each substance may be recognized and classified. Animals, as well as plants, are also classified according to type, and type is but a name for normal form.

In many cases these forms are mathematically regular, as in the rhomboidal figures on the cones. Mr. Mosely has detected geometrical progression in the size of the whorls and the distances between contiguous whorls in the shells of certain mollusks. "There is traced," he says, "in the shell the application of properties of a geometric curve to a mechanical purpose, by Him who metes the dimensions of space and stretches out the forms of matter according to the rules of a perfect geometry.*

The lower tribes of plants and animals often assume regular mathematical forms, triangular, polygonal, cylindrical, elliptical, spherical. The leaf veins and tree outlines are in regular curves. Oersted's maxim was that "inorganic beings constitute the elementary, and organic the higher, geometry of nature."

The correspondences of nature in form and function indicate design, as between the human hand and arms, the fore limbs and hind limbs of mammals, the birds' wings and feet, and the fishes' fins and tail, and have suggested the words, homologue and homotype and analogue.

---

* 'Philosophical Transactions for 1838."

Nature likewise discloses special adjustments which are necessary to the beneficent working of nature's forces. All the forces and properties of nature are correlated. Mechanical power produces heat; heat, chemical action; this latter, electricity; and electricity, motion, light, heat, and other results. There is a circuit in nature to which all things contribute. Natural forces being blind—that is, unintelligent—must be regulated in their beneficent action by some intelligence, as steam in an engine must be applied by human skill if the engine is to move and stop when desired. In the exercise of force, chemical, electric and magnetic, luminiferous and calorific, and vital, there must be something more than mere extension or dead matter. Had the proportions and coincidences of the universe been different, the cosmos would be chaos; had centrifugal and centripetal forces not been so exquisitely balanced; or had not each orb been weighed in the scales, and its dimensions, specific gravity, distance, orbit, and volume been accurately determined, the system of the universe would have been unbalanced and ruin would have resulted.

Look where we will, we thus meet on every side the marks and proofs of a master mind and hand. Nothing has been left to accident. Plan and purpose pervade the universe, and the object in view is beneficent. Beauty, symmetry, and utility are combined in a wonderful manner, and proclaim infinite wisdom.

If there be any one mark of this controlling intelligence in creation that is calculated to impress the observer with special force, it is the unity found amid all this diversity.

For example, the researches of the last century have more and more pointed in one direction, establishing a universal *law of motion.* Light and color, heat and sound, magnetism and electricity, are believed to be modifications and conditions of this one mysterious all-pervasive principle. The tendency of all scientific discovery is toward a few original elements, and there are some scientists and philosophers who believe that all elements are finally reducible to one; and so the trend of scientific research is all toward motion as the universal fact of creation — the ultimate "mode" of matter.

The full significance of such august facts it is difficult to weigh. As the highest art exemplifies simplicity, the products of an infinite mind may be expected to exhibit unity. The diversity and variety of creative products add immeasurably to their beauty and utility; but the unity which pervades them all indicates the highest conceivable Intelligence—a mind capable of framing the universe upon a plan so simple, yet so broad and comprehensive, that such plan shall embrace all its vast variety of contents.

It is a sublime conception that to the one law of motion so many phenomena should be traceable. It has been found by experiment that every musical note is a repetition, at equal intervals of time, of the same definite noise; that the pitch depends on the rate of repetition, and the quality on the nature of the fundamental noise. Thus sound, with all its various phenomena, is ultimately due to motion.

Light, in a uniform medium, moves in straight lines. Its main phenomena are due to reflection and refraction. Huygens propounded the wave theory of light—that it consists *not in the transference of matter, but of energy.* The velocity of these wave vibrations is incredible, as light waves transmit this energy at the rate of 186,000 miles a second. If Newton's corpuscular theory were true, allowing the particles to weigh only one ten-millionth of a pound each, light would come to the eye with ten times the momentum, or entering power, and six million times the kinetic energy, or penetrating power, of a rifle bullet. What delicacy of adjustment, when the wave length of the extreme red ray is only two hundred and twenty-six ten-millionths, and of the violet, one hundred and sixty-seven ten-millionths of an inch! But velocities so incredible have been measured so that we know approximately how many vibrations produce any particular color of the spectrum.*

Some years ago an American scientist constructed what he called "a vibratory ladder" to express this fact of universal motion. Certainly it would not be difficult to exhibit to the eye, in some measure, this great law, and some of its phenomena or modes of working. Beginning at sixteen vibrations to the second, the lowest note audible in the musical scale, the ladder ascends through the eleven octaves which constitute the range of the ear, to the limits of sound vibration, thirty-eight thousand vibrations to the second. Then there is a leap to the electric level, with ninety-five millions of vibrations; then to that of dark heat, at one hundred and twenty-nine thousand millions of vibrations; and then to the color spectrum, beginning with the red, at three hundred and ninety-five thousand millions, and reaching its limit in the violet ray at eight hundred and eighty thousand millions. Subsequent scientific investigations have corrected some of these calculations, but have not affected the general law.

---

* International Encyclopædia. "Undulatory Theory."

EYE	Realm of Light Color Octave	Violet Indigo Blue Green Yellow Orange Red	880,000,000,000 395,000,000,000
TOUCH		Dark Heat	129,000,000,000
NO ELECTRIC SENSE		Electricity	95,000,000
SOUND OCTAVES MUSIC		Limit of Sound	38,000
		Music	4,000 16

The order pervading all things has been demonstrated in many other ways, as by Dr. Wilson in his "George Combe Lectures" in Scotland, in his "Balance Sheet of Vital Energy" in the human body. He represented the income of the body as:

	Grains
Water	37,650
Solids	8,000
Oxygen	13,000
Total	58,650

The outgo as :

	Grains
Lungs	20,000
Kidneys	24,100
Skin	11,750
Intestines	2,800
Total	58,650

Where, then, lies the profit? In the energy developed. But where can another machine be found running with so little friction and waste of energy? Such remarkable balance in the working of a delicate mechanism must argue both a master mechanic to build and a master engineer to conduct and control it.

V

THE PERFECTION SEEN IN MINUTIAE

The Argument from Design in Nature includes in its true scope the perfection of little things, which is a weighty consideration, and if it does not seem so the scales of judgment do not hang true and must be at fault. We are not only to "consider the heavens," but "consider the lilies," as said the greatest of Teachers — the lilies, among the most minute of all created products in the vegetable world. It is in the minutiæ of creation, perhaps, that the most surprising marvels, mysteries, and miracles of creative workmanship are often found.

It is here also that the works of God so singularly differ from the works of man. However elaborate man's work, it does not bear minute microscopic investigation. For instance, the finest cambric needle becomes coarse, rough, and blunt under the magnifying lens; whereas it is only when looked at with the highest power of the microscopic eye that Nature's handiwork really begins to reveal its exquisite and indescribable perfection. Where the perfection of man's work ends the perfection of God's work only begins.

Thus it is that the perfection of the Creator's products is seen equally in the atom and in the universal system. While the telescope opens the gates of the heavens and reveals infinity in the worlds above, the microscope unlocks the little worlds below and introduces us to another infinity—that of littleness! The telescope and spectroscope testify to the vast scope of God's wisdom and power and skill in starry orbs and systems of suns; while the microscope shows myriads of living creatures in the compass of a dew-drop, each with a perfect organism fitted to its needs; revealing the first beginnings of organic life, marvelous arrangements of organs, and provision for all the minutest functions of that complex thing called Life. Every addition to the telescope, therefore, enlarges our ideas of the Divine majesty and power, and "every increase of optical skill applied to the microscope reveals an infinity in the descending scale—an infinity of minuteness, condescension, and Providence." *

The proofs of this perfection in minutiæ are lavishly abundant. They are found alike in the ground on which we tread, the air we breathe, and the water we drink. Ruskin wrote of "the ethics of the dust," and he might have written also of the

---

* "Agreement of Science and Revelation," Wythe, p. 145.

apologetics of the dust. The Tuscan Hills are built of chambered shells, ten thousand of which may be found in a single ounce of stone. A cubic inch of tripoli contains more than forty million silicious shells of fossil infusoria. When a piece of chalk is drawn over a blackboard, in the white mark on the board, or the powder that falls on the floor, are millions of tiny white shells, once the home of life. The dust from the moth's wing is made up of scales or feathers, each as perfect as the ostrich plume. The pores of the human skin are so closely crowded together that seventy-five thousand of them might be covered by a grain of sand. The insect's organ of vision is a little world of wonders in itself. In the eye of a butterfly thirty-four thousand lenses have been found, each perfect as a means of vision. The minute cells, in which all life, vegetable and animal, resides, present as true an evidence of the mysterious perfection of individual workmanship and mutual adaptation as the constellations that adorn the sky, and equally with them declare the glory of God!

The common spider's web has often been cited as a witness to the fineness of God's work. The astronomer finds it needful to stretch across the eye-piece of the telescope the most delicate possible fibres, crossing each other at right angles, in order to enable him to determine, even to the subdivisions of a second, the precise time at which a star crosses the center of the field of observation. No spindles of human invention have ever spun a thread fine enough and strong enough for this purpose. It must be very fine, for, at the distance of Sirius, the whole of our planetary system might hide behind the diameter of one thread. The "arachnid" comes to the aid of the astronomer. With four protuberances pierced with invisible holes, out of each of which proceeds a thread, the spider weaves into one strand four thousand fibres, and yet that strand is finer than has ever been obtained by man with all his boasted triumphs of invention and skill.

In all this delicacy and perfection there is obvious mark of intelligent purpose. Nothing is aimless. In the geranium petal the skin of the leaf reveals the most exquisite design; with the air cells, the fluid cells, the *stomata*, which automatically open and shut as the plant's life demands. It is hard to believe that no purpose of wisdom lies back of such structure and mechanism! In the seed vessel of one of the ferns—the black maidenhair spleenwort—the sheath that contains the spores is clasped with a bracelet which, at the season of ripeness, unclasps, leaving the dry sheath to burst and fling the spores in every direction.

The earwig's wing folds like a fan, breadthwise, then folds again lengthwise, and slips into a wing sheath for protection from injury when not in use. The wasp's wing is used too constantly to admit of such a sheath, yet it must not be too broad or large, as the wasp often bores into the ground. The upper wings, therefore, have a single fold, and the same marvelous machinery which lifts the wing straightens it out and hooks the lower part to the upper, making one broad wing of the two.

The higher we ascend in the scale of creation the more abundant and overwhelming these marks and illustrations of creative design become. Sir Charles Bell was so charmed by the human "hand, its mechanism, and vital endowments, as evincing design," that he wrote the fourth in the "Bridgewater Treatises" on this theme, and he found seventy thousand words not enough to express these marvels of structure and form, function and fitness. The hand has been called by Professor Tenney "the intellectual member," for whatever the mind can conceive the hand is able to express. The human ear, which has already been cited as an instance of adaptation, is equally an instance of perfection in minutiæ. It is, in a double sense, a labyrinth of mystery, with its external ear, or auricle, for collecting sounds, its middle ear, or tympanum, for their transmission, and its internal ear, or labyrinth proper, for delivering them to the terminal organs of the auditory nerve.

As to the eye of man, it has taught us the whole science of optics. It is a camera obscura, with a convex lens in front, an adjustable circular blind behind it; a lining of black to prevent double and confusing reflections; humors, aqueous and vitreous, to distend it; a retina or expansion of the optic nerve, to receive the images of external objects; with minute provisions for motion in every direction; and, most wonderful of all, perhaps, perfect provision against the spherical and chromatic aberration which would produce images and impressions ill-defined and false colored. Yet the microscope shows these lenses themselves to be made up of separate folds, in number countless, the folds themselves composed of fibers, equally countless, and toothed so as to interlock. And with all this, perfect transparency is preserved. Every peculiarity, however seemingly insignificant, has a meaning. There is a reason why it exists, and it is one of the "trifles" that "make perfection."

We are told of a Brahman, who, finding that the microscope was exposing the utter falsity and absurdity of some of his superstitious notions, dashed the instrument to the ground, breaking its lenses to silence its testimony. He who would no longer believe that the atheist is a fool must silence alike the voice of the telescope and the microscope. These witnesses unite to declare that there is and must be a God. They tell of effects behind which there is a great first Cause; tho mute, they yet proclaim an intelligence back of creation—a thought that demands a thinker.

Few objects in nature are more common than the snowflake, yet nothing is more beautiful or more repays careful microscopic study. The snowfalls, which sometimes reach a depth of twenty and even forty feet, are made up of crystals, usually in the form of six-pointed stars, of which no less than a thousand different kinds have been observed, and many of them, figured. These numerous forms have been reduced to five principal varieties: 1. Thin plates, a numerous class, with several hundred forms of exquisite beauty and incredibly complicated in structure. 2. A spherical nucleus or plane figure, studded with needle-shaped crystals. 3. Six-sided, or, more rarely, three-sided crystals. 4. Pyramids of six sides. 5. Prismatic crystals, having, at the ends and middle, thin plates perpendicular to their length, set like wheels on an axle. The crystals of hoar frost have their own character, and each tree or shrub has its own crystals.

Snowflakes vary from an inch to one seven-hundredth of an inch in diameter, and yet this perfection extends to the smallest flake. The white color of the snow is the result of the combination of the different prismatic rays, issuing from the minute snow crystals. What design is manifest here! From its loose texture and its containing about ten times its bulk of air, snow is a very poor conductor of heat, and thus becomes a pure white blanket covering the earth from the effects of radiation, so that often, when the cold is intense, the soil beneath the snow covering is forty degrees warmer than on the surface of the white mantle.* It is owing to this fact that travelers in regions of intensest cold and deep snows dig deep holes in the snow and take refuge in these extemporized abodes from the freezing air, and, wrapping themselves in their furs, sleep comfortably in their temporary snow chamber, sheltered from the piercing winds and the extreme cold.

Dust is even more common than snow, but it is an object of dislike and dread. Yet what boundless fields of research it offers! These fine particles which fill vast regions of the atmosphere and float on the breeze are marvels of variety and often of structure. Some of them are pollen grains of flowers; others, bits of vegetable fiber or hair ; others, mineral, metallic, and rocky fragments—metallic iron or nickel, cobalt, phosphorus, magnesia, or iron pyrites. Some dust is volcanic, some magnetic, some is meteoric or cosmic—minute ærolites. Here is another region of the minute, whose variety and beauty challenge investigation, and awaken wonder and admiration.

---

* Alden's Encyclopedia. "Snow."

The study of the *mosses* reveals a similar beauty of detail, all the more striking because, at first sight, these plants exhibit so little attraction. As they are examined, the leafy stem, the operculated capsule or urn, which opens at the top and is filled with spores, is arranged around a central column. We find the capsule covered with a hood, and when it is ripe and has thrown off the calyptra and operculum, it exhibits around its mouth a single or double row of rigid processes, always four, or a multiple of four, collectively known as the *peristome*. There are minute cylindrical sacs, occurring in the axils of the leaves, or collected into a head at the summit of the stem, which finally burst and discharge a large number of spherical or oval vesicles. When these are moistened with water, through their transparent walls may be seen filaments coiled up within, wheeling rapidly round and round. Many of the mosses are exceedingly beautiful, and their capsules and other organs and flowers reveal, under the magnifying-glass, a little world of delicacy, symmetry, and beauty scarcely credible to those who, with untrained eyes, see these humble plants clothing the exposed surface of rocks, sands, and tree trunks, or struggling for life on mountain tops and in the inhospitable regions of the pole.

In no one department, perhaps, are minute beauty and perfection of symmetry more apparent than in the realm of *crystallization*, already illustrated in the snowflake. It seems wonderful that matter should take on such definite geometrical forms, and of such variety, each form being characteristic of one or more substances. The external forms of crystals amount to several thousands, but they have been classified under six different systems:

1. The *regular* (otherwise known as cubic, octohedral, tesseral, tessular, spheroidal, or equi-axed), which has three axes or straight lines passing through the same point, of equal lengths and placed at right angles to each other. Hexahedron crystals have each six square faces, with twelve equal edges, eight equal angles, and three equal axes. The octohedrons have eight faces, all equilateral trian-

gles, and twelve edges with six angles, each having four faces.

2. The *square prismatic* (pyramidal, tetragonal, or quadratic) has three axes placed at right angles to each other, two being of equal length, the third longer or shorter. The right square prism and the right square based octohedron belong to this class.

3. The *right prismatic* (right rhomboidal or rectangular prismatic) has three axes, all of unequal lengths, but at right angles to each other. The right rhombic prism and rhombic based octohedron belong to this class.

4. The *oblique prismatic* (oblique rhomboidal or rectangular prismatic) has three axes, which may all be of unequal lengths, two being placed at right angles to each other, the third being so inclined as to be perpendicular to one of the two axes and oblique to the other.

5. The *doubly oblique prismatic* has

three axes of unequal length which intersect with each other obliquely.

6. The *rhombohedral*, or regular hexagonal, has four axes, three in the same plane, and inclined to each other at an angle of sixty degrees, the fourth being perpendicular to the three.

To this mystery of crystallization mineral beauty is mainly attributable. It is this variety of form and angle, meeting the light with such marvelous power of reflection, refraction, and separation into the color rays, that makes the most common substances, as well as precious stones and metals, so beautiful. Copper, gold, silver, spar, rock crystal, the topaz, the garnet, the diamond, must all acknowledge their debt for inimitable colors and brilliant hues to their crystalline structure. Men have spent their lives investigating this realm of countless splendors, and have not exhausted it. To most people it is an unknown world.

Yet how it speaks of a Creator who can lavish beauty even on the stones, and who carries the perfection of his work into the realm of the least as well as the greatest!

In an unpublished poem of Thomas Bailey Aldrich, which was read at a college commencement as a substitute for his own presence, we remember some exquisite lines:

"Nothing is created vainly," saith my soul. "All things that are
Have a deep, unfathomed meaning—falling leaf or shooting star.
There is One whose tender love is folded in the buds that blow,
Thou cans't hear His holy footfalls in the dropping of the snow.
His the starry isles of heaven, and all that lives and moves and is;
Even the heart-throbs in thy bosom are the echoing of His."

VI

THE PROBLEM OF LIFE'S ORIGIN

THE Origin of Life is also a Gordian knot which no infidel philosophy has ever been able to untie, and perhaps no problem presents more perplexity, while the existence of a Divine Creator and Life-giver is denied.

Here is the sum of all mysteries, and, therefore, to find a satisfactory solution to this problem is to achieve the highest success. A strange something is found, moving in the animal or vegetable cell—something which no microscope can detect or define, and no science has as yet been able to discover. This something takes from water, air, and soil what it wants and needs, separates its proper material for construction and nutrition, and builds up, with unerring certainty and precision, another structure like that of which it formed a part.

The seed sends down root fibers and sends up stem fibers; it then develops leaves, flowers, fruit, and seed, each in its own order and after its own kind; and the vegetable products of the earth are all fitted, with equally unerring precision, to the exact soil and climate in which they grow. Stranger still, they are all as exactly adapted to the wants of the animal forms of life or the human beings among which they are found.

Animal cells, with similar certainty, build up animal structure of the same sort as that to which the cell belongs; and with this life-development comes animal instinct; or, in case of man, that higher order of intelligence which culminates only in humanity. In man is found the apex of the pyramid of creation. He has powers of thinking and loving, judging and choosing, reasoning and speaking, which exalt him immeasurably above all other known forms of created life, and endow him alone with indefinite capacity for improvement.

In a calm, scientific spirit, it may be asked whether any system of science or philosophy, which leaves out a Personal Creator and Designer, has ever given any satisfactory clue to the origin of Life. A few of the solutions proposed to this great enigma may be mentioned :

1. The theory of *Harmony*. This suggests that life is the result of general harmony, or consent of action, between the different organs of the body. This was the theory of Aristoxenus, the Greek physician and musician.

It will be seen that this leaves untouched the ultimate mystery. This strange harmony of action itself is still to be accounted for. Aristoxenus, as a musician, familiar with the harmonies of sound, naturally sought to explain all life's harmonies by a similar law to that which prevails in music. But had some one asked Aristoxenus himself to explain the mystery of music, it would not have sufficed for him to look very wise and say, "Musical melody or harmony is the result of an orderly succession or combination of separate sounds." One might still ask how the various chords come into such orderly succession and combination. That is the very mystery needing explanation. It is easy to trace the harmony to the harp-strings; but the vibrations of the harp-strings must still be traced to the hand of the harper. Until that is done the mystery remains unsolved.

It is so in the created universe. There is a marvelous harmony, but that very harmony demands an Infinite Musician, who knows when, where, and how to touch the chords and make them vibrate in sympathy with His purpose. Any attempt at solution which stops short of such intelligence seems absurdly inadequate. Behind the universal harmony is the universal harp; but, back of the harp, there must still be the Harper. The heavens, therefore, declare the glory of God, and the earth joins the heavens in its tribute to Him who touches the chords of Life and makes them vibrate in harmony.

2. By others, Life has been declared to be the result of *organization.*

But, as John Hunter unhesitatingly declared, Life *precedes* organization, and, so far as can be seen, *organization is the result of Life.* To account for Life, therefore, as the result of organization is at best not a solution but an evasion, even if it be not a contradiction. Coleridge compared such an hypothesis to the sophistry which accounts for the house by the process of building, leaving, unaccounted for, that process of building. Any house must have been before the builder's eyes before it was even begun. The workmen did not start to build without a plan. Before the first stone was laid or the first timber set up, the house existed in the drawings and specifications, and any perfection in structure is only due to the carrying out of the perfection, even of details, in the plan.

Professor Schleiden used to visit an asylum in which he found a queer lunatic who was wont to stir black puddings, bristles, and pigs' feet in a spider over a fire, whispering the meanwhile, "Hush! wait a moment, till we create a little vital heat, and we shall have as the result—pigs!" Yes, but it was that "vital heat" that was lacking and could not be thus created. Such a proposal may become a lunatic, but it ill becomes a sane and rational being. Even if matter were conceded to be itself uncreated and eternal, it is necessary to find some personal Creator, Designer, Maker, in order to account for the forms, crystalline, cellular, organic, which matter assumes. Even if the marbles were forever existing in the quarries, that does not account for the perfect proportions of the Parthenon. The building is not simply a mass of material. The material is mixed with mind, as the painter declared his "colors mixed with brains." It was mind that dreamed out the "blossoming in stone," and devised the structure—that saw it while the stone was yet in the quarry. Some One saw this universe before "the morning stars sang together" in the harmony of the spheres, before the first orb of light shone, or the first living creature beheld the sun marching through the sky. So some One must have been the fountain whence flowed the million streams of Life—vegetable, animal, and human.

One author refers to sundry attempts to define Life, in order to show their unsatisfactory character. They are definitions that need defining. De Blainville says, "Life is the double interior motion, general and continuous, of composition and decomposition." Or, again, "Life is the sum of all the functions by which death is resisted," etc. These definitions, and others like them, are all of the nature of definitions "which define nothing and themselves need to be defined." Alexander von Humboldt complained of the scientific levity with which Strauss coolly leaps the chasm between the organic and inorganic; and Franz Hoffman calls this kind of materialism "a massive conglomerate of intrinsic contradictions. Here change is said to originate from the unchangeable;

motion, from absolute rest; life, from the dead; sense, from the senseless; purpose, from blindly acting causes; intelligence, from the unintelligent; spirit, from the unspiritual." *

Any definition that does not define is no addition to either science or philosophy. Instead of relieving, it rather increases perplexity. We seek to understand a subject by the definition, and such definition itself only presents a new subject to be understood.

The late Joseph Cook boldly arraigned materialism as cowardly, fearing to face such great problems as those of the correlation, conservation, and coordination of force.

The correlation of force is seen in the mutual adaptations of nature—the wing and the air, the fin and the water, the ball of bone and its socket in the joint, the appetite and its food, the migratory instinct of the bird and

---

* Farrar, 35, 36.

the sunny Southern clime. The coordination of force is seen in the web-footed frog, and the automatic and influential nervous organization. "If," says Mr. Cook, "Life precedes organization, why may it not both be independent of organization and survive it?" The conservation of force shows us that, whatever changes take place in the forms of matter, modes of activity, or workings of force, not one particle of energy is ever lost. There is only a new distribution—a diversion to new channels. Light and heat are the same in quantity as at the beginning, tho stored away in vast coal deposits for ages.

These are among the mysteries of nature, inscrutable without a Creator. But the foremost of all forces is that which we call *Life*. In this domain the finest instances of correlation, coordination, and conservation are found. Can materialism account for the existence and operation of this greatest force?

Some, who advocate "development" as a great discovery, acknowledge its insufficiency to meet three great needs:

(1) It fails to supply a proper starting-point—original creation.

(2) It fails to furnish well-ascertained facts—it is at best only a working hypothesis, not yet proven.

(3) It fails to satisfy other important conditions, and is open to the gravest objections.

For example, there are differences in species which are not compatible with the theory that they have a common origin, and have developed without culture; for, when left to themselves, cultivated varieties show a tendency to revert or return to the original type. The Brassica plant represents a large genus of annual or perennial herbs of the mustard family (*Cruciferæ*) of the old world, furnishing several of the earliest cultivated and most valuable table vegetables. *Brassica oleracea* is the common parent of the cabbage, cauliflower, kale, kohl-rabi, Brussels sprouts. *Brassica campestus* gives rise to the turnip and rutabaga. Here is a plant which grows wild on the sea-shore, but under proper culture takes new forms—growing with a compact head or heart, as in cabbage; with thick or short flower-stalks as in cauliflower or broccoli; or developing cellular tissues so as to take on the appearance of greens. But, when again left to grow wild, these varieties gradually disappear, the original type being reverted to; and so with the apple and pear, if all culture be abandoned, the crab-apple or crab-pear results. How then can one species, if left to itself, either develop into new varieties or be transmuted into another?*

---

* Wythe, 156, 157.

Sir Charles Bell gave it as his mature judgment that "everything declares the species to have its origin in a distinct creation, not in a gradual variation from some original type." Lyell says: "Species have a real existence in nature, and each was endowed at the time of its creation with the attributes and organs by which it is distinguished." To the same effect also Sir David Brewster, Agassiz, and other scientists and philosophers.*

Quite apart from faith in the Bible, we can understand why an ancient poet should have written: "The fool hath said in his heart, there is no God."† The late Professor Henry, of the Smithsonian Institution, once said that, of all the foremost men of science in his day, he knew but one who could in any proper sense be called an infidel. The master minds of all ages, irrespective of religious creeds—the foremost men in the scientific world, like Galileo, Kepler, Newton, Bacon, Herschell, Hugh Miller, have united in testifying to their belief in a great first cause. Kant himself acknowledged this idea to be necessary to reason and as perfecting and crowning the entire system of human cognitions. Sir Isaac Newton thus sublimely closes his *Principia* : "This most beautiful system could only proceed from the counsel and dominion of an intelligent and powerful Being who governs all things, not as the soul of the world, but as Lord over all. . . . The diversity of natural things, suited to different times and places, could arise from nothing but the ideas and will of a Being necessarily existing." * Certainly we must resort to the idea of a personal Creator to untie the Gordian knot of the origin of Life.

---

* Wythe, 158. † Psalms, xiv: 1.

---

* Wythe, 124.

VII

THE WONDERS IN LIFE'S REALM

LIFE is all around us, like an element. We live in it as birds in the air and fish in the sea. It throngs about us in myriad forms, too minute to be detected by the naked eye, so varied, complex, and intricate as to defy all the power of science to explain or even to classify. The "Laws of Life" exhibit the proofs of creative wisdom, skill, and goodness.

Lamarck classified the animal kingdom under *Vertebrata* and *Invertebrata*. Cuvier subdivided the invertebrata into *Mollusca*, *Articulata*, and *Radiata*. The microscope shows a new world of minute animal forms, yet more primitive and original, known as *Protozoa*. Later science has again broken up the Radiata into smaller subordinate groups—*seven* subkingdoms, known as Vertebrata, Annulosa, Annuloida, Mollusca, Molluscoida, Cœlenterata, Protozoa.

The second of these, a world in itself, contains four-fifths of all living creatures found on the globe, embracing some 200,000 species of ringed or jointed-footed animals, of which 150,000 are insects with six legs.*

Both plant and animal reveal wonderful rapidity of multiplication. Were the whole earth barren, and were one plant set in the soil producing fifty seeds a year, multiplying at this rate, unchecked, in ten years it would cover the earth. In a similar way, one pair of birds, having four young ones each year, could, in fifteen years, unchecked, produce 2,000,000,000. Some animals multiply inconceivably fast. A single Aphis may in one summer give rise to such a progeny that it takes a million multiplied by itself four times, and thirty places of figures, to express it.*

---

* "Life and Her Children," Buckley, 10, 158.

Life, in the animal realm, has much in common with the *plant*. 1. Both begin with the *cell*, which at first it puzzles the acutest scientist to distinguish as belonging to animal rather than plant, there being the same rotation of cell contents and the same multiplication by division. Both plant and animal have processes corresponding to respiration, circulation, and perspiration.† Both are capable of motion and sensation, and exhibit to a certain extent what may be called intelligence. In both are provisions for growth and for the propagation of life, each according to its kind, and in some cases for the replacing of lost parts.

In fact, the dividing line between plant and animal on the borders of these two kingdoms is not always plainly drawn. The diatoms were long thought to be animals and the sponges to be vegetables, as also the corals.*

---

* "Life and Her Children," 4, 204.

† For instance, the correspondence of stomata in plants with spiracles of grasshopper.—Ibid, 212.

Some distinguishing marks, however, enable us to discriminate.

The motion of the animal is voluntary and intelligent. Flowers sway to and fro in the wind, but animals voluntarily move. An inspired sentence declares of man that, in God, he "lives and moves and has his being." † And Moses spoke of the animal as the "moving creature that hath life." The drop of thread slime (Protogenes) looks like a globule of jelly or gum till it puts out its fine threads to lay hold of its food, spreads itself mysteriously over the morsel, absorbs what is good, and ejects the shell.‡

---

* "Life and Her Children," 10, 17, 35.

† Acts, xviii : 28.

‡ "Life and Her Children," 17.

Here is motion with a purpose behind it. Life is gauged by *motion*, and in general *quick* motion is a sign of higher intelligence.

2. There is development of parts or organs which are used not mechanically but intelligently. Even in the *Protozoa*, where there seem to be *no* parts or organs, the animal has power to extemporize feelers or hands, mouth and stomach. And, as we ascend life's ladder, we find animal forms not only moving, eating, breathing, feeding, growing, but having parts and organs increasingly numerous, complicated, and complete; at first a stomach, then hands and feet, then eyes and ears, and nervous system, then a head, till the highest perfection of organization is reached in the human form.

On the rim of the jelly bell there is a faint suggestion of eyes and ears as well as the rudiments of a nervous system, and that power to exude phosphorescent fluid that seems to bathe the sea with the very essence of Life itself.*

The higher we ascend the more complicated become the processes of animal life. In the sponge there is a division of labor—one set of cells taking in food and another sweeping away the refuse; while, between these two, are building cells which frame the skeleton supporting the body. Here in one animal framework two or three kinds of activity are intelligently carried on.

Again, when we pass from animals that are fixed, or float, to those which move freely in the sea, we have made another stride toward higher life; when we reach those that have *heads*, we are on much higher ground; and yet higher, in the common prawn, with its keen power of seeing, hearing, feeling, and even smelling.†

---

* "Life and Her Children," 60, 64. † Ibid, 161.

Below the vertebrata no animal breathes through its mouth. (Even the Ascidians appear to be degraded vertebrates.) The sponges, jelly-fish, and corals breathe through the skin; the starfish through the perforated plate in his back; the oyster by the gills fringing his body, and the insect through holes in the sides.*

3. The animal shows a higher order of intelligence than the most perfect plant. The "power of the living drop of slime to choose its own materials" is one of the most startling facts in the history of Life's simplest children. The slime which builds one form or another seems to be the same, and yet has its own mode of life and growth. The brain of the fly is thirty times larger than the beetle's, while the beetle himself is four times as big as the fly. The animals which undergo "metamorphosis" manifest

---

* "Life and Her Children," 117.

instinct and intelligence which in some cases rival those of the vertebrates; so that the wasp, the bee, and the ant have come to be reckoned as the representatives of ingenuity and sagacity.*

Both intelligence and motion are found to be strangely connected with certain knots or nuclei of nerve-matter. In the spider they cluster thickly together in head and neck and connect with a line of knots running along under the abdomen. The size of these nerve-ganglions is another index of the rank of the animal in the scale of being; and in all insects which live in communities, like wasps and bees, these nerve masses in the brain are larger than in animals which work in separation. The size of the nerve ganglions, therefore, indexes also the *social instinct* which marks a higher order of life.

---

* "Life and Her Children," 25, 266.

The cockroach—the pest in our houses—is very intelligent, but the ant bears away the palm among insects for sagacity; and the termites, or white ants, not only build vast dwellings for their communities, but have their own king, queen, workmen, soldiers, and slaves.*

4. Animal life is marked by a peculiar degree of independence, or self-dependence.

Even the lowest forms of animal life are furnished with the means of subsistence, and with weapons of offense and defense. The tools they work with, and the weapons they fight with, all grow upon their bodies.

The sponge, so long classed among the sea-plants, has, embedded in its slime, little lime spikes—spicules—varied in shape and exactly adapted to its needs; so sharp and so hard that the foe that would devour the sponge, or invade its recesses, learns to avoid it; and altho so different in shape, each has some special office and use, in keeping out enemies, strengthening the structure, or securing food for the animal.*

---

* "Life and Her Children," 189, 217, 225, 227, 265, 276.

Hundreds of the *cœlenterata* are furnished with curious thread cells, or animal lassos. The fine feelers of the common hydra, small as a hair, are yet packed with these cells, so small that from 200 to 1,500 of them may lie side by side within an inch of space, yet each cell contains a lasso, from twenty to forty times its own length, furnished with a barb, and bathed in a poisonous fluid. These are flung out with such violence as to pierce the body of the foe, and thus subdue animals larger, swifter, and stronger. Hundreds of these are found crowding the mouths and stomachs of the *sertularia*—each mouth a mere speck scarcely visible, yet furnished with sixteen arms and each arm full of thread cells.*

---

* "Life and Her Children," 44.

The greedy whelk has an auger or saw with which to bore through the hard shell of the shell-fish on which he feeds. His snout carries a toothed rasp which is moved up and down, and files or saws a hole through which he may suck the substance from within the hard covering.

The *octopus* is armed with suckers that hold on to his prey with terrible tenacity; yet, that he may elude his mightier foes, he is furnished with cells containing yellow and red, brown and blue liquids, so that he may becloud the water, or assume the hue of surrounding objects.

The scorpion hides in the tip of his tail a poisoned dart, and pincers form part of his jaws. The spider has fatal fangs hanging down over the mouth.

---

* "Life and Her Children," 53, 57.

The leaf insect looks so like the leaf it crawls on as to elude even the bird's eye; and so teeth, claws, tail, sting, feelers—all these and various devices for offense and defense—fit the creature for a self-dependent life.*

It seems a law that animal powers strengthen with exercise and exertion. Wherever any creature has little use for its powers or uses them but little, it either belongs already to a feeble class or becomes feeble like the whole group of parasites. The ants that enslave others depend on their black slaves, and are lazy and idle and incompetent. They can not build their own nests or nurse their own young; and Huber found that, tho he placed food close to them, they actually died, without their attendants to feed them; and that, when they migrate to a new community or abode, they lie on their backs to be carried.

---

* "Life and Her Children," 119, 129, 180–183.

The simplest animals are endowed by nature first with the power to catch food and *feed* and the power to build a solid skeleton or framework with the particles of matter found in the sea.*

In some cases we find animal surgery, as, when the lobster loses a limb, to avoid bleeding to death, it throws off the injured member at the next joint, forms a new skin, and grows a new limb.

5. Yet, contrary to all natural inference, dependence increases as we ascend toward higher forms, and rise in the scale of intelligence toward ultimate independence, the dependence in infancy being more absolute, and independence the slower in coming to maturity.

In the lowest forms the young drop as buds from the parent, self-dependent from the start. Grubs and gnats, from their emergence from the egg, care for themselves; bee, wasp, ant, foremost in mental capacity among insects, need nursing by others to survive infancy; and so the monkey baby must for a few *months* have care. When in man we reach the height of intelligence, we find also the extreme of *dependence*.

---

* "Life and Her Children," 75, 144, 199, 291.

6. Animal *metamorphosis* deserves special notice.

A marked change takes place in most of the *crustacea* at some time. The crab gets too small for his shell, creeps into some crevice, casts himself upon his back, swells out his body, and breaks loose from his coat of mail. His flesh becomes softer, losing hardness and firmness, before he casts his shell, for only so can he withdraw his claws through the narrow joints of his armor.*

The insect begins life in one form, wraps itself in a hard covering or softer shroud, and after a while emerges in a form bearing no outward resemblance to its former self, and only careful observation convinces us of the identity of the two.

---

* "Life and Her Children," 169.

The caterpillar emerges from the cocoon a winged butterfly or moth—but so the beetle and fly were once maggots or grubs; the flea was once wrapped in its tiny cocoon; the sponge was a swimming animal till it settled down to form its solid framework; the lasso-throwers first swim, then become fixed, and the little jelly bells they throw off from branch and bud are more unlike the parent than the caterpillar is unlike the butterfly.

In starfish and sea-urchins this metamorphosis is more complex. The jelly animal develops within itself a second and a different form, which by and by swallows the first and goes on its way. The oyster and cockle lose their eyes when they become fixed in life, and the crab could hardly be expected to know its own offspring.

The cockroach and cricket get wings by the last change of skin; the May-fly gets a new breathing apparatus suited for the air. Mr. Newport traced the tortoise-shell butterfly through its mysterious changes; first the eggs, then the yellow-gray caterpillars spinning their silk web on the leaf, foraging for food by day and hiding under this canopy by night. These greedy feeders get too fat for their skin; so, after a short period of fasting, they split the coat along the back and cast it off. This they do at least five times before the caterpillar throws off its last skin and emerges a butterfly. Various modifications are necessary in order to adaptation.*

In some forms of animal life there is a complicated series or succession of changes.

---

* "Life and Her Children," 233–238, 265.

One of the flukes (*Distoma militare*) is at first a parasite worm, hooking fast to the entrails of some water bird; then the eggs fall out into mud or water and hatch out an imperfect animal; out of this develops a fourth form which clings to the water-snail. Then, within its hanging bag, or sac, a group of little tailed animals form, which fix to the snail, drop their tails, change shape, and wait to be swallowed* with the snail by some water bird, and again form a parasite in the entrails.

In the jelly-fish there is an example of the alternation of generations. Their ova, instead of producing great sea blubbers, result in little hydra tubes which form colonies, whence again jelly-fish form.

---

* "Life and Her Children," 138, 139.

VIII

THE PROBLEM OF ANIMAL INSTINCT

ANIMAL Instinct is a perplexing problem. It is a knot easily untied in one and but one way, namely, by supposing and conceding a creative Intelligence as in some mysterious way impressing on each living product of creative skill whatever knowledge is necessary to the fulfilment of the primary functions of existence, and impressing this from the outset. This seems both a rational and a satisfactory solution. It meets the needs of the case so absolutely that to invent any other hypothesis seems needless. Nor would any other have been resorted to but for the persistent effort to get rid of a personal and intelligent Creator. So stubborn has been this atheistic or materialistic attitude that it suggests a moral motive behind it—a burdened conscience, originally setting men on a quest for some other theory which eliminates the supernatural factor.

Whenever we see a highly finished work wrought by common, uneducated workmen, incompetent of themselves to plan a cathedral, chisel a statue, project a triumphal arch, or achieve any other artistic results, we know, intuitively, that behind their ignorance and incompetence there hides the genius of a master, who dreamed out the fane, the arch, the statue, the tapestry. The rude, mechanical workmen are the hundred hands of labor that move obedient to the one head of inventive, creative genius. Some controlling mind and will are back of the merely mechanical movements that without such guidance could never produce such a result. Brain has been the regulator of brawn, muscle has obeyed mind.

Scientific research has made us familiar with the beauty and skill of the spider. The thoughtless and ignorant crush under foot a creature of God which, for beauty of appearance, excels the butterfly, and, for beauty of environment and skill of workmanship, is not easily excelled even by man. One author * points out the merits of this miscalled "insect," as a universal philanthropist, without a fault manward, and thinks the world would be scarcely habitable without the spider. He writes, with a pen that for attractiveness rivals the artist's pencil, of the "orb-weavers," the "sectoral orb," the "triangle web," the "horizontal web," and follows the sagacious arachnid as it stretches its thread across the brook, teaching man a lesson in building a suspension

---

* Rev. Henry C. McCook, D.D.

bridge, as the web material is borne up by its own buoyancy ; or, again, holding the trap-line taut, so as to show every motion of the web and reveal the presence of a victim when caught in its meshes ; or, again, ensconcing itself in a bell-shaped tent, formed by rolling leaves together.

The same writer has pointed us to the ants—the "carpenter," "mason," and "arboreal" ants ; the masons, subsoiling the earth for man, building galleries like sewers, arching them and leaving "manholes ;" the harvesters, constructing splendid roads, all radiating from the ant-hill, etc. After mating time the queen cuts off her wings, thereafter to be a keeper at home.

The student of plant life must be blind indeed who discovers no evidence of a Designing Mind and Hand. Even the plants seem to have an instinct which governs their growth and development.

The plants, both by their rich stores of honey and their gay colors, invite the bee to gather and scatter the fertilizing pollen. The plants of the coal age had no such bright blooms, for there were no such flying insects to bear the pollen; and the grasses, sedges, willows and rushes, oaks, nut trees, elms and birches, neither secrete honey nor hang out gaudy attractions, because, as they scatter their pollen by the wind, they need no such help from bird or bee, butterfly or moth.

The daisy—day's eye—opens and closes with the sun's rising and setting, while the evening primrose and night campion open their flowers, and pour out their perfume at evening, because the night moths, whose size and shape exactly fit them to brush off and bear away the pollen dust, fly only after the sun has set; and so the honeysuckle gives its richest fragrance at nightfall in order to attract to its blossoms the sphinx hawk moth. Other flowers, like the pimpernel, or shepherd's weather-glass, close at the approach of the rain storm, in order to protect their pollen, or, like the daisy, to protect their honey; while others, for the same purposes, bend over,* and by their attitude escape a wetting.

What was it that made the purple lines in the blue wood geranium to converge toward the nectary, guiding the bee to the honey, and yet left the night-opening blooms without these marking veins, because the insects could not see them in the dark, if they were there? Mr. Darwin wrote a book on the orchis flowers, showing the marvels of the arrangements whereby their pollen is both protected and scattered. The blossoms of these plants are like complicated chambers, which must be unlocked to be opened and entered; and they remain locked until the custodian of their secrets comes with the mysterious key.*

---

* "The Fairy-land of Science," 213.

"The pencilled geranium has a small and insignificant blossom, but its pale and tender petals are interveined, as tho with some monogram of the Divine artist, with delicate and exquisite reticulations of purpling lines." † Thus both the plants and the animals seem to have impressed on them an Instinct which provides in advance for emergencies and exposures or risks that have not as yet been experienced. But man, the highest of animals, has no such instinct. He learns to care for his wants and to provide against emergencies only by an experience of them, and his provisions against needs and perils become more and more complete and comprehensive as his experience enlarges. The plant and the animal make complete provision from the beginning, but it is equally noticeable that they never improve upon it. The bird builds no better nest, the beaver no more skilful dam, now, than thousands of years ago. If we seek the solution of this problem, in the instinct itself, we fail; but to admit that the instinct is a product of a higher creative Intelligence supplies what philosophers call an "adequate hypothesis," and solves what is otherwise an inexplicable enigma. Moreover, it is one of the canons of all scientific and philosophic research that, if any hypothesis meets all the conditions and explains all the phenomena, it is needless to inquire further; and that any hypothesis which approximates such satisfactory solution shall not be abandoned until another more completely meeting the difficulties is found.

---

* "Fairy-land," 230–235.

† Farrar.

While Descartes and Buffon denied all intelligence to animals, not perceiving the limit between human intellect and the lower intelligence of other animals; while Condillac and George Leroy, on the contrary, accorded to animals even the highest intellectual operations, confounding instinct with intelligence, Frederic Cuvier's discriminating mind drew the line between the intelligence of the different orders, tracing it from the lowest rodents, through ruminants, pachyderms, and carnivora, to the quadrumana. He found the greatest intelligence in the orang-outang, but pointed out that this *decreases as the animal grows older*, the docility, intelligence, and cunning of the young being replaced in the adult by the intractibility and stupidity of a disgusting brute. Taking the beaver and the dog for examples, he showed the difference between instinct and intelligence. The beaver, a rodent of an order that manifests least intelligence, builds its dam and habitation in a most remarkable manner; but young animals, removed from their parents and placed in comfortable houses, have yet shown the same disposition to build, impelled by a blind internal power, instinct, as distinguished from intelligence. Instinct, Frederic Cuvier maintained, acts of necessity, invariably in the same manner, without adaptation to circumstances, without education, and for a limited purpose; thus the beaver builds his dam and the bird its nest. Intelligence, on the contrary, chooses its means, modifies its acts of will, learns from experience, and follows no irresistible impulse; the dog and the horse understand and obey their master because it pleases them so to do, but they may disobey if they choose, and may apply their acquired knowledge to a variety of purposes.

With this understanding of the two forces, the actions of animals can never be placed above, or on a par with, the intelligent acts of man. Animals receive and remember impressions, associate them together, and draw conclusions from them which influence their conduct; but *man, alone*, according to Frederic Cuvier, *reflects upon his own sensations*, *experience*, and *thoughts*. This power of reflection draws the line between the intelligence of man and that of animals;* as James Martineau says, "Man reasons about reason and thinks about thoughts." The peculiar faculty called "ratiocination" seems to be confined to man. The process of argument is in the animal orders very crude and primitive. The human being has power to review his intellectual processes, discern their defects, improve his mental methods, and approximate nearer and nearer to logical, rhetorical, and philosophical perfection.

---

* See fine article in Appleton's Encyclopedia, "Cuvier."

To him who thus beholds and observes minutely and microscopically the creative handiwork, an imperative voice is perpetually saying, "Come now and let us reason together," appealing to the reason, whether all these marks of design, of intelligence, of skill in planning and working, do not demand a more rational explanation than any infidel theory can supply.

A beehive is an unanswerable argument against materialism and atheism.* Here is a city with from twenty thousand to sixty thousand little inhabitants, with symmetrical dwellings, palaces, and storehouses, and with perfect subjection of all its tiny citizens to its laws. It is throughout a busy, thriving, orderly community. The hive is kept in repair, even to the cementing of the cracks. The wax cells are built in that six-sided form that is geometrically the most economical of room, thus filling every atom of available space, while avoiding all needless waste of wax. Working bees and nursing bees all do their own work without mutual interference. In gathering honey, the proboscis is thrust down into the nectaries of plants, and the pollen is kneaded into bee-bread for the young. In nursing the larvæ, there is discrimination made between the eggs of the common bees and those of the future queens. Into the cells of the latter, the nursing bees, instead of ordinary food, put a sweet pungent jelly which, if fed to a common worker-larva, would develop it into a princess, and set it apart to a special destiny.

---

* "The Fairy-land of Science," 193, *et seq.*

When swarming is necessary, a new colony or community is formed, thus also avoiding the inevitable fight between rival queens; but, when there is no occasion for a new swarm, the workers no longer protect the royal cells, but permit the young queen to sting and kill the yet imprisoned infant princesses that would, on emerging from their cradle cells, dispute her succession to the throne. The bees ventilate the hive, fanning through it a current of air; they clean out the cells, guarding against wax moths, and embalming with gum the carcasses of dead foes too big or heavy to be moved. Thus this little city has in operation a perfect sanitary system.

What lies at the basis of all this gathering of material, building and manufacturing, storing and nursing, cleansing and ventilating? The common answer is, Instinct. But what is, and whence comes, this instinct? Is not this also an effect demanding a cause? Instinct is but a term to express the intelligence of the bee. But intelligence is with man the result of observation and experience, whereas in the case of the bee it precedes both observation and experience, and is, from the first, perfect for its purpose. From the beginning of the bee's existence everything is done just as it should be, so that there is no room for modifications or improvements. The work done in a hive is not perfected by experiments. No such experiments are made or needed. When men seek to unlock the mystery of a beehive, they use "Instinct" as the key; but every key demands a maker who adapts it to the lock ; and who, in this case, is the Locksmith? Whence came this unerring and universal animal instinct and intelligence?

There are many cases, of which this is but one example, in which animal intelligence is obviously both antecedent to and independent of experience. There is an intelligence at work, but not the intelligence of the bee alone.

Huber, the blind naturalist, noticed that a queen bee, immediately on being hatched, never having seen a rival, goes about at once to sting the larvæ of every other queen bee. Such a course is deduced from no previous experience, for she is the new-born sovereign; yet somehow she knows she has a royal destiny to fulfil, and that the first necessity is to get out of her way all the unborn rival claimants to the throne.

Animal studies often surprise us by evidences of a similar instinctive intelligence that can result from neither hereditary descent nor early training. The fact, already referred to, is unusually significant that the lower we descend in the scale of creation the more does animal life seem to be independent of the education which comes through one's own experience or another's. With the higher forms of life are connected comparative helplessness and dependence. In proportion to the elevation of being is the slowness of development. The needful lessons are learned by degrees, and the young are unable to take care of themselves until a certain age is reached. But, if we go down to the lowest level, that of the monad and mite, the desmid and diatom, we find these lesser creative forms furnished from the start with all the instinctive knowledge necessary for their preservation, and for the fulfilment of life's various functions.

The solitary wasp does not feed on flesh, and can not know that, from the egg laid in sand, a larva is to come; yet it puts in the hole the exact number of green worms needed for sustenance, until the wasp-worm, becoming a fly, can find food. The nympha of the water-moth must maintain itself in equilibrio with the water in which it lives. It covers itself, by means of a gluten which exudes from its body, with bits of straw, wood, gravel, and shells. When the coating is too light, it adds more gravel; when too heavy, more wood.

In the Indian Ocean myriads of minute polypi build a goblet known as "Neptune's Cup." It sometimes reaches a breadth of three feet and a height of six. Yet each of these almost imperceptible creatures works in a separate cell, as effectually shut off from all communication with the rest as the inmates of a prison. What architect superintends this structure, so directing these builders that, without mutual agreement, they build the stem to its proper height, then widen and shape the cup-like cavity, and round it into completion? Here is a plan, exquisitely complete and running into numerous details; but the plan is evidently not that of the builders. Here is superintendence, yet it must be from without; intelligence, but it must be of a higher grade than that of these tiny builders.

The dauber wasp builds its habitation and stores there food for its offspring. The young, when hatched, will need spiders on which to feed, and the wasp knows just how to capture the spider and enclose it in the chamber, where and how to sting it, so as to paralyze and render it helpless and yet not to kill it; and the first spider the wasp thus stings is captured as skilfully as the last. The spider builds the first nest and web as well as any subsequent one, guarding against all the blunders which inexperience would naturally involve, from the spinning of the first fiber. The wasp takes the most direct mathematical line of flight from the clay bed where she gets material to the nest she is building, for instance, in a room. If the entrance to that room has been an opening afterward closed, the wasp flies about till some other opening is found, and then by unerring instinct takes the most direct course to the nest. The ant builds the first habitation, nurses the first grubs, and guards both habitation and offspring against all risks, as perfectly as tho a thousand errors had educated the insect in the dear school of experience, and corrected the follies and blunders of earlier days.

IX

THE PROBLEM OF THE CONSCIENCE

ANOTHER knotty problem concerns the beginning of *Conscience.*

Whence came the moral sense which, in its degree at least, seems peculiar to man? It is called the moral *sense*, because it seems to correspond to those mysterious physical faculties whereby we hold communion with the outward and material world—the five senses, sight, hearing, taste, touch, smell; and some would add a sixth—the muscular sense, whereby we perceive the proportions, weight, inertia, or momentum of objects. Man has an ethical instinct, a faculty of moral sensibility to impression. It is far higher in the scale and keener in its perception than any merely bodily sense.

There is an inner eye, that sees into the nature of right and wrong; an inner ear, sensitive to the faintest whisper of moral obligation; an inner touch, that feels the pressure of duty and responds to it sympathetically.

The tendency of all infidelity is toward naturalism and materialism. There are those who assert that nothing is real but matter; that man himself is only organized matter; that thought is matter in motion, simply a higher form or manifestation of that universal law which in the lower sphere produces light and heat, color and sound and electricity. According to this philosophy, all thinking and feeling, loving and choosing, are the play of material forces operating on and through material substance. Men do right or wrong, according as, in the brain, the spiral movements are from right to left or from left to right. Not every one who follows such a theory may see where it leads. If materialism be the final truth, the goal which the thinker must logically reach, from such a starting-point, is blank atheism, and death is annihilation. There is no God. There is no standard of right and wrong, and there can be no such thing as duty. Benevolence is but a waste of substance, differing from malevolence only by its relation to expediency, provided it be true that "men are mere masses of matter, differing from trees only in the fact that they are differently organized," as Darwin and Spencer teach.

"Wherein is a virtuous thought better than a vicious thought if both are purely physical results of the displacement of molecules of matter in the brain, as combustion results from a similar displacement of wood fibers?"

The results to which such gross materialism inevitably leads ought to make men hesitate to take a path that conducts to such an abyss of atheism! Virtue and vice become mere products of good or bad nutrition, not of right or wrong volition. Character and conduct, aspiration and affection, are dependent on oxygen and ozone, hydrogen and nitrogen ; good air and water and food and physical habits are of primary importance. "Man *is* only what he *eats*," as Feuerbach would say ; we might add, what he *breathes*. No wonder the German Philosopher of Anspach went beyond his master, Hegel, by combatting the doctrine of immortality, and denied to the Absolute any existence except in man's own brain, and regarded all authority above man, and consequently all moral obligation, as a delusion proceeding from man himself. The highest pleasure becomes the highest good, and blank atheism is the climax of such a system. "All morality ceases to exist; ethics is converted into a bill of fare." The natural consequence is that there is no such thing as sin or crime, and therefore there is no justice in penalty and punishment.*

Professor Huxley and his fellow scientists have been trying to make men believe that even the various forms of religion prevailing are simply direct results of different kinds of food. Some editorial wag has reduced this doctrine to absurdity in a mock narrative of Huxley's latest experiment. It is said that the naturalist got possession of a large "litter" of young children, whose father, a positivist, was willing to donate them for the scientific experiment. It cost the father no uneasiness, since they had no souls and no hereafter. Huxley fed them all on different diet, and kept them in material surroundings favor-able to variety of development. He fed the oldest on Swiss cheese, weak brandy-and-water, kept him in a very cold room, and exercised him in climbing artificial precipices. Of course *he* developed into a rigid Calvinist, preaching denunciatory sermons against the flies and gnats because they were fond of sunshine, and preparing a bonfire to burn his nurse because she would not believe as he did.

---

* Farrar, 40.

Another boy he fed on oatmeal and whiskey, kept him in a damp room, and sprinkled him with a spray like a Scotch mist. *He* developed into a Scotch Presbyterian, with broad accent, and aversion to pictures, images, scarlet color, and the sound of an organ.

A third boy was kept in a hot room, fed on light wines and macaroni, and made to grind a hand-organ. Of course he turned out a Roman

Catholic, with great fondness for forms and great devoutness, together with a cruel delight in sticking his penknife into the professor's legs.

Another was fed on pork and hominy, but allowed only *water*, but plenty of that; it was expected to develop a *Baptist*, but by some mistake in calculation he proved a cross between a Methodist and Presbyterian.

The *fifth* boy was treated with great care, Huxley designing to develop an ideal scientist—his diet, roast beef and ale; his playthings, slates and pencils, and various scientific instruments and curiosities. Other boys were brought in to play with him, pitching and tossing pocket Bibles. Greatly to Huxley's astonishment and disappointment, his young scientist proved an impertinent, malicious little wretch, who had insufferable conceit, and was more intolerant than the worst religious bigot. He would hoot at and stone every respectable passer-by, especially if such chanced to wear a white cravat. He gratified the professor by denying any God, but disgusted him by calling him a bigoted idiot and ignoramus, and trying to stab him with a penknife. Of course, as will be seen, there was not the slightest resemblance between this boy and the scientist which Huxley aimed to produce! It is well known, adds this literary joker, that all scientists, especially of the infidel class, are remarkable for their charity, humility, and reverence.

This witty satire conceals an argument. There is nothing in man that more challenges and demands adequate explanation than his moral sense. Conscience is a court always in session and imperative in its summons. No man can evade it or silence its accusations. It is a complete assize. It has a judge on its bench, and that judge will not be bribed into a lax decision. It has its witness-stand, and can bring witnesses from the whole territory of the past life. It has its jury, ready to give a verdict, "guilty" or "not guilty," in strict accordance with the evidence; and it has its sheriff, Remorse, with his whip of scorpions, ready to lash the convicted soul. The nearest thing in this world to the bar of God is the court of conscience. And tho it be for a time drugged into a partial apathy, or intoxicated with worldly pleasure, the time comes when in all the majesty of its imperial authority this court calls to its bar every transgressor and holds him to a strict account.

Certainly for such a court there should be some adequate explanation. Whence came its moral standards, its complete furnishing for its awful work, its power to elicit facts and compel man to face its tribunal; and whence came its power also to inflict such terrible penalties?

Surely any mode of accounting for conscience which tends to destroy its very foundations, to annul or reverse its grand decisions, and to make its eternal principles seem no longer binding, can not be either true or best.

The destructive tendency of all infidelity and skepticism even as to this, the noblest moral faculty in man, is one of the most serious charges to which the rejectors of a supernatural faith are liable.

Goethe puts into the mouth of Mephistopheles, in "Faust," a significant definition of himself: "*I am the spirit of Negation.*" Negation simply denies; it affirms nothing. It is destructive but never constructive, pulling down but not building up. With a reckless disposition to demolish all accepted truth, it says of the most sacred verities of revealed religion, one by one, "It is not so," and there leaves the believer. What we call religious faith is equally impossible under pantheism, atheism, or materialism. If there be no real personal God, whom are men to worship? or, if all things be God, who is to worship Him?

As we have seen, morality is equally impossible. For if, as Fichte taught, I am the absolute, I create my own moral duties, and can not be required to conform to any standard independent of myself. And, if, as Hegel and Schelling maintained, I am a mode of the Divine Being, my actions flow from the self-determination of the deity, and are all equally necessary and equally divine.*

The lament of the Psalmist is still appropriate. Time was when a man was famous according as he built up; but now men achieve a cheap notoriety by breaking down as with hammers and axes the carved work of the sanctuary.* Nothing escapes the destructive weapons of modern iconoclasts. Even this imperial temple of conscience, which on every part and property proclaims man's nobility and allies him to Divinity, the ruthless iron flail of infidelity would utterly wreck and ruin.

---

* Compare Mansel's "Limits of Religious Thought." Also "Farrar," 322.

To a sane and reverent mind infidelity is destructive even of common sense, and leads to the sheerest absurdities. Pyrrho doubted everything, and at last consistently doubted the existence even of an external world, so that when he walked out some friends accompanied him to prevent his walking off a precipice; for it was plain that, tho he might doubt the existence of the precipice, his doubt would not prevent his being badly crushed by a fall. And so Pyrrhonism has come to represent the absurdity of universal doubt, that leaves the doubter to question his own existence—*i.e.*, to doubt whether there be any one who doubts.

---

* Psalms, lxxiv:6.

Agnosticism may well be put alongside of Pyrrhonism as another example of absurdity. It denies the reality of any knowledge of things spiritual and supernatural, and indeed the possibility of such knowledge. God is essentially unknowable, and logically all knowledge is limited by the sphere of our senses and material things.

Somebody calls this absurdity "agnostic conjugation." The editor of a certain scientific monthly magazine, writing as himself an agnostic, has said: "The agnostic ground is that religion, in so far as it is supernatural, transcends human intelligence, so that man can really *know* nothing beyond the phenomenal and the finite. He may imagine much and believe much, and fancy that he knows, but strictly tested it turns out that his conjectures are not knowledge in the true and proper sense. *The position of the agnostic*, in short, in regard to other worlds or spheres of existence beyond time, space, and the course of nature, is briefly this: 'I know nothing, and you know nothing, we neither of us can know anything, and we would better modestly confine our thoughts to the universe which we can know.'" A reviewer, criticising this position, remarks: "We use to learn, *amo*, *amas*, *amat; amamus*, *amatis*, *amant* (I love, thou lovest, he loves; we love, you love, they love). But now it is to be: I know nothing, thou knowest nothing, he knows nothing; we know nothing, you know nothing, they know nothing; nobody knows nothing."

Infidelity is constantly changing front, as if to evade its own inevitable issues, "folding its tents like the Arabs, and as silently stealing away."

There are certain marine animals, like the octopus, which, when pursued, throw out a colored secretion which beclouds the element and enables them to elude pursuit. And so skepticism takes refuge under vagueness, indefiniteness. No sooner does one attempt to meet its negations than he finds himself encompassed by this mist of obscurity. If you demolish one error or absurdity it takes shelter under another form, and by the time you have studied some new mode of attack there is a new modification. Probably there are no two skeptical minds that could agree on a consistent creed, even of negations. Their only point of agreement is hostility to revealed and supernatural religion. And, for the sake of destroying the faith of man in the supernatural, infidelity is ready to accept and propound any theory, however absurd, or shift from one to another, however contradictory!

Infidelity has never proved constructive. It furnishes no adequate and satisfactory philosophy in place of all it destroys, and supplies no solution of the practical enigmas of life. It gets no further, even at the best, than with a show of candor and reverence to ask, with Pilate, "What is Truth?" but, like Pilate himself, gives no answer to its own question, content to deny that Truth has ever been found by man or revealed to him.

X

THE PROBLEM OF MAN'S NEED

IN the universe we have found already a law of correlation. Between all created things there is a marked mutual fitness. Wherever there exists a need or lack of any kind there is something else obviously designed and fitted to supply that need and meet that lack. So universal is this law that the discovery of the need becomes a prophecy of the correlative factor which is to match it, as bone fits socket; wing, air; or fin, water; as food fits hunger; light, the eye; or sound, the ear.

Man has higher needs than those of the *body*, and a more exalted hunger than that of bodily appetite; he craves knowledge, and there is truth to feed the craving; he yearns for companionship, and society is provided; he longs for love, and there is the answer of affection. There is in him a demand for activity, and there is work to employ him; he needs beauty to gratify his esthetic tastes, and moral ideals to satisfy his ethical aspirations and imitative powers, and finds both needs met.

Man feels a still higher need—deliverance from the conscious guilt and dominion of evil passions and habits. There is, moreover, a yearning after God which is so tenacious and persistent in its hold upon man as man that no tribe has yet been found wholly destitute of a sense of sin, wholly without a conception of some Supreme Being or overruling Power, and wholly destitute of any form of religious faith or worship, or standard of right and wrong.

This prepares us to expect confidently that the law of correlation will still hold good, and the more is it likely that something shall be found to answer such aspirations, inasmuch as they belong to a higher order and, *a fortiori*, should have their corresponding higher sphere of satisfaction. We are prepared, if we are consistent, to believe, almost instinctively and without logical demonstration, that there is some revelation of God suited to man's moral nature, and that there is some remedy for his restless conscience and heart-yearning after the Divine. If man is restless, as is the magnetic needle until it ceases from swinging on its pivot and points due north to the magnetic pole, he must find his Pole somewhere and rest in Him.

This class of wants the most complete system of natural science or human philosophy has hitherto failed to meet. Even natural theology, tho it gives a glimpse of God, does not go far enough to solve the problems for which man imperatively demands a solution. He yearns to know whence he came and whither he is going, and not only whence and whither he is, but *what he is*. This complicated question involving so many others—his origin and destiny, duties, relations, and highest interests—this the highest nature of man more and more yearns to have answered by competent authority, and until then it finds no repose.

On these subjects Nature is almost silent. If she gives any oracular response at all, it is ambiguous or doubtful. From the created universe we may gather hints of God's existence and *natural* attributes, but we are left uncertain as to His *moral* character and attitude toward man. We get glimpses, from the creation of the world, of His power, wisdom, and skill, but hear no clear utterance as to His goodness and love. Moreover, Nature sets up no cross of sacrifice and opens no gate of reconciliation. There is not a suggestion of gracious forgiveness and compassion; in fact, if we judge from Nature alone, we infer an immutable reign of inexorable law—a rigid succession of transgression and penalty. Nature knows no pity or remission of penalty, and but little, if any, delay in punishment. As says Huxley, "To him who disobeys Nature's laws and will not learn, she has nothing in store but annihilation."

Even when the transgressor of Nature's laws is sincere in his repentance, he finds that inflexible law in operation: whatsoever a man soweth that shall he also reap.

He who cuts his hand must wait for it to heal, and even then carry the scar. He who falls accidentally, jumps intentionally, or is flung maliciously, from a precipice, is dashed mercilessly against the rocks below, for Nature makes no discriminations. How could we, from any system of merely natural theology, form any idea of a Lawgiver at the head of the universe who would show mercy toward penitent sinners?

We should not even know with any certainty that the Sovereign of the Universe is good, for Nature seems at times and in some moods malignant rather than benignant, and destructive rather than constructive. Disease, pain and death, pestilence and famine, earthquake and tornado, burning heat and icy cold—all these would leave us in doubt as to whether God is love, or whether, as the Persians believed, there be not at least a rival and evil power contending for the control of the universe.

Here, then, we find a new sphere for the application of the argument from correlation.

"There is," said Cicero, "I know

not how, in the minds of men a certain presage, as it were, of a future existence, and this takes deepest root and is most discoverable in the greatest geniuses and most exalted souls."

Dean Goulbourn refers to another illustration of this correlation: "Birds there are which hatch the eggs of other birds of the same species and rear a brood not their own; but when a bird thus reared happens to hear the cry of its own mother, by a marvellous operation of instinct it flies toward her and takes refuge under her wings."

Man is not in his true nest, and is a wandering bird. He has capacities for a higher fellowship and a nobler satisfaction. There must be some "mother bird" to whom he belongs, and whose voice, when heard, he will instinctively recognize, and to whose bosom he will speedily fly.

The doctrines of infidelity are

uttered in a very dogmatic tone, and with an air of infallibility which is quite papal in positiveness. For example, one declaration is that "every step that science takes leads mankind farther away from the idle hopes and fears of Christianity toward the calm of eternal truth." Whereupon Dr. Stebbins, a Unitarian divine, utters a flat denial. "I affirm," says he, "most deliberately, after nearly fifty years' study of science, as well as theology, with the ardor of a lover, that there is not a single discovery or accepted fact of science which in the slightest degree militates against the teachings of Christianity as revealed in the Gospels."

Not only, then, is there some rest for man's moral disquietude, but there is nothing in human discovery which makes rest in the doctrine of God unreasonable and absurd. If science can not reveal God to us, it does not shut us up to atheism. It may be agnostic itself and hold that by its processes God is unknown, but it can not forbid raising an altar to this—scientifically—unknown God.

While, then, the study of nature alone can never supply an adequate religious faith or even ethical system, "any system of natural theology which looks for its evidences solely to natural phenomena is of necessity defective and powerless." Christian truth may be confirmed by it, but can not be inferred or derived from it. Assuming, as the Bible does, the existence and attributes of the Creator, all natural phenomena fall into a consistent relation to the theistic theory and doctrine; but no man can, by simple observation of nature alone, come to an adequate understanding either of the Creator or of the creation. Hence the necessity of a Divine, supernatural revelation, first to supplement and complete the revelations of nature, and then to furnish a true key even to those phenomena themselves.

Is there anything that fits the moral need and consciousness of man?

The swan is restless till he finds the water, and is from the first at home on the bosom of the lake, tho he may never have seen a body of water before reaching his full stature and growth. And so, as Augustine said, "Thou, O God, hast made us for Thee, and our heart is restless till it rests in Thee!"

The Christian believer finds men feeling after God in the darkness if haply they may find Him; and, to the religious yearnings that center about so many false objects of worship and unsatisfying theories, he calmly says, as Paul did to the men of Athens: "I beheld your altar to the unknown God! Whom therefore ye ignorantly worship, Him declare I unto you!"

The highest witness to Christianity, as to any other truth, is therefore its witness to itself. Hence its sacred Book challenges rather than avoids investigation, and bids men "search the Scriptures" and find out their internal testimony.

Many times have men approached Christianity to assault it, but have been compelled to admire it, and ended by tarrying to adore its central Person—coming into its awful cathedral structure to scorn and scoff, but waiting to praise and pray!

Two men, born within three years of each other; both naturally gifted and poetic; both educated at Eton and Christ Church, Oxford; both holding offices of state; intimate friends, they were also violent infidels, determined to use their own powerful pens in a joint attack on the Christian faith. The defenses they were planning to undermine and overthrow it was necessary they should first carefully study, to discover their weak points. And so they agreed to examine the Bible in a thorough and scholarly manner, to find its most assailable and pregnable exposures.

When after this investigation they again met, instead of coming together to join in an assault, they met as *converted men*. Approaching the Word of God in a candid spirit, they had been overwhelmed by the proofs that they were studying a more than human book; and the pens they had proposed to employ as weapons of offense they now determined to use as weapons of defense! One of them, George Lyttleton, wrote a dissertation on "St. Paul's Conversion," while the other, Gilbert West, prepared a companion treatise known as "Observations on the Resurrection," both able and powerful arguments for the Divine truth of

Christianity. It was as when Saul sent messengers to seize David, and the Spirit of God came upon them and they became prophets; and so it came to pass a second and third time; and at last the king himself went in person to entrap the anointed Psalmist; but, lo! the Spirit was upon himself also; and so the proverb originated: "Saul also among the prophets."

Yes, the Bible contains its own witness; but not every man—not every *reader* — detects this sublime voice that speaks from within this word. "There are even so-called believers," said Norman McLeod, "who no more grasp the truth which they seem to hold than a sparrow grasps the message passing through the electric wire on which it perches"; or than the marble or metallic statues in our public squares feel the crystal streams which pour through their cold hands into the fountain's basin below.

But he who earnestly and devoutly investigates beholds one and the same Author, both in the cosmos and the Logos; in both the same inherent symmetry, grandeur, glory; the same marks of an infinite mind and an infinite hand. Even its apparent divergencies are all resolved as its internal features are more carefully examined and compared; or, to use a musical figure, they are like discords of the seventh leading to a divine harmony!

XI

THE PROBLEM OF THE LIFE BEYOND

ANOTHER Gordian knot is the problem which Job put in words: "If a man die, shall he live again?"—the enigma of the life beyond. It is not too much to say of this that it is the problem of the ages. In the temple of universal truth there are two main pillars, and on the security of these the whole structure depends: one is the existence of God, and the other is the existence of man after death. If the former pillar is removed, the whole universe becomes a chaos of confusion, a product without a producer, a gigantic effect without any adequate cause. If the latter pillar be removed, man becomes but organized matter, life itself a mere play of mechanical forces, and he has no future beyond the grave. The problem of immortality, therefore, involves three others: What is man?—whence is he, whither goes he? What is life?—its source, its essence, and its goal? What is death?—extinction of being, or an exchange of sphere of being?

It can easily be seen why men are tempted to deny a future life.

Such denial is sometimes the protest of intelligence and benevolence against the superstitious horrors and cruelties associated with the belief as held by the ignorant and the debased, or by the philosophers and poets who seem to have delighted in picturing an inferno of torment. The myths of Tantalus and Sisyphus are examples. Men would hug the delusion of annihilation rather than face such an immortality of conscious misery.

In other cases, the denial of a future

life has come from undue stress upon the evidence of the senses. Men often argue too exclusively from appearances. The apparent phenomena of death, if we look no further, suggest and imply destruction—annihilation. All that is visible and tangible turns to dust, indistinguishable from the actual, literal dust on which the living man treads. This the Bible itself concedes: "Then shall the dust return to the earth as it was." But just here it adds: "But the spirit shall return unto God, who gave it" (Eccles., xii.). This affirms that "things are not what they seem," as Longfellow wrote, and that there is an invisible self, called "spirit," which, not being of dust, can not be resolved into dust or affected by physical dissolution.

Even science itself warns us not to be misled by mere sensible phenomena. Nearly all appearances in nature deceive us until interpreted and modified by experience. The sun appears to move about the earth, whereas it is the earth that revolves on its own axis; the moon appears to pass through degrees of illumination under the sun's rays, whereas one full lunar hemisphere is always exposed to the sunbeam, and it is only our point of view that makes the phases. When the body dies, all we know is that the life principle, whatever it be, no longer manifests itself through the bodily organism. But we have no more reason to believe that life principle to be extinct, than to infer that the electric current is extinct because it is diverted from a medium through which it has been passing.

Spirit can only be discerned by spiritual senses; it evades the grosser senses, as light can not be detected by the auditory nerve, and color can not be discerned by the sense of smell.

Another reason why men deny immortality is because of a revolt of prejudice against the authority of dogma. There is a pride of reason which, in magnifying the right of private judgment, goes too far and assumes that it is irrational to believe what one does not know. But where would have been the pioneers even in scientific discovery had they never believed what they did not know? It was their faith in facts which could not yet be proven which led Columbus and Galileo, Le Verrier and Morse, Edison and Marconi, out on their career of discovery, investigation, and experiment. Faith in what was yet unknown, but faith born of intelligence and hope, has been the guiding star of all progress. Rev. Dr. C. F. Deems wisely said to young men, "Believe your beliefs and doubt your doubts; never make the mistake of doubting your beliefs and believing your doubts."

Some who deny immortality are misled by hasty and superficial scientific deductions. They affirm that "nothing can be discovered in the universe but matter and its properties." But what an unexplored realm is suggested by what is here included in "*its properties*"! Is *life* one of those properties? If so, has science ever discovered life, or traced it to its source or goal? Was life existing before it animated matter? If so, does it not exist after it no longer animates matter? Science can not demonstrate immortality, for it can not dissect and analyze spirit, or even detect it. The question remains which science can not answer: "Is there in man a spiritual entity?" One source of confusion is that the theory is carelessly adopted that the mind is but the action of the brain, whereas all we can affirm is that the brain seems to be the material organ through which mind acts—the battery for the subtle life principle and thinking power.

Looking at the matter purely as scientific investigators, are we not conscious of spirit—of something majestic, within, which even to the mind says, "stop," "consider," "reason," "reflect." We can trace two sets of nerves: one bringing tidings to us from without, and another carrying volitions from within; and it would seem that, at the center of this mysterious telegraphic circuit, there must be an *operator* who receives and transmits messages! Grant that ideas are but "transformed sensations," what is that subtle something that transforms them?

We are told that a photographic image, removed, may be restored by the fumes of mercury. Memory reproduces impressions from a mental plate, with a million other latent images and impressions made on the same sensitive plate before and after it. Is all this a mere mechanical process?

It would seem that there is a spiritual intelligence within us which constitutes our true *being* and is known by phenomena of its own—that the real man is invisible. The dwelling is visible where the man resides, and the signs of his being within are visible or audible, like a light or the sounds of life in an occupied dwelling while the occupant is unseen. The body is a mechanism, made for purposes of contact with the external world, for communion and communication; but behind the mechanism is some one who holds contact, who communes and communicates. Every man is conscious of being different from his body. The body is constantly undergoing change by waste and resupply. The machine is in part constantly being displaced, and replaced by new material. I think it was Mr. Wendling who used to say, "The machine goes, I stay; by and by I go, the machine stays."

The problem of *man's* spirituality and immortality especially demands solution, for in no other animal but man can we trace any such intelligent moral control. The majestic power of resisting evil and overcoming it, the conscious conflicts and conquests of the inner self in temptation, the patient acceptance and endurance of sacrifice and discipline where something is recognized as needing correction—these seem to demand, scientifically, a spiritual nature superior to the body, and in a sense independent of it and surviving it. When Paul kept his body under, and would not be brought under the power of any appetites or indulgences, even tho lawful, was *he* not different from the body he kept under and the desires he controlled? Was he, the master, the same as what he mastered?

This Gordian knot can be untied only in one satisfactory way, namely, by conceding that, while the body receives air, food and drink, digests food, assimilates oxygen, builds up tissue, it is the province of the spirit to think, feel, reason, judge, and will. The authors of "The Unseen Universe" made in that book an effort to demonstrate the reality of unseen things, from a scientific point of approach. The optical and auditory apparatus is an apparatus only; it is for the purpose of receiving and making available to us light and sound. The man himself, behind the apparatus, is the intelligent being for whose use the apparatus is constructed and to whom it is available. This seems to us scientifically and philosophically reasonable.

We make a careless blunder when we speak of death as tho it were itself an active agency, a force, like life, whereas it is the mere negation of life—a condition of body after the living spirit has left it.

There is also a positive argument in favor of immortality found in the analogies of science. Nature knows no annihilation, even of matter. Destruction is but the opposite of construction—that is, it is loss of structure. The subtlest solvents may dissolve, but can not destroy; the mightiest forces modify, alter conditions, transform so as to be unrecognizable; but not one atom of matter has ever been annihilated, much less has the force which controls it. Sir William Hamilton, after a life spent in scientific and philosophic studies, gave it as his verdict that "there is nothing on earth that is great but man, and in man nothing great but his soul."

When magnetism is applied to iron, it makes the iron magnetic. There is somehow a combination of invisible force and visible matter, and so long as the combination continues the iron may hold to itself a heavy weight of hundreds of pounds. The moment the electro-magnetic force is withdrawn the cohesive power is gone also; but does that imply the *annihilation*, or only the *transfer*, of that mysterious force? Shall we, then, on scientific principles, infer the annihilation of that more subtle force which moves upon and in the human body because it ceases to move within its former sphere?

Added to all other arguments for immortality, we may mention the prevailing belief of the race, never anywhere quite extinct. Every want and instinct of man argues a life beyond. Did not even Kant, who stood appalled before the two abysses—the boundless abyss of space and the equally boundless abyss between right and wrong—

did not Kant confess that, if God expects moral perfection of man—and God can exact no less—man must have a moral opportunity not found in this life?

If nature is the realm not of failures, blunders and disasters, but of success, wise adaptation, and ultimate good, wrought even through seeming ruin—of new constructions out of destructions—is man alone doomed to failure? It is obvious that, unless there is a life beyond, man is not a success: he serves no fit, final end. Life seems only a vestibule to a higher existence, a discipline for a nobler school, an introduction to a grander experience. Even benevolence accomplishes but little in relieving the vast sum of human misery; it is a drop of sweetness in an ocean of gall! Infidelity in denying immortality degrades man. The Bible in affirming it exalts man. It makes him feel his majesty. It tells him that the soul knows no youth or age—that all that speaks of decay and decline is of the material part, and it whispers of a continuity of life, with only a change of sphere! If this be not the final solution of our problems it ought to be, for it seems the fit destiny for man and the fit solution of the universal mystery.

The inscription under the statue of Copernicus at Thorn is sublime:

"TERRAE MOTOR, SOLIS COELIQUE STATOR."

Which may be freely rendered,

"To him who bade the earth move, and the sun and heavens stand still."

But, on his monument in St. John's Church, we read:

"I crave not the favor which Paul received, nor the grace with which Thou didst pardon Peter; I only pray for that which Thou didst bestow from the cross upon the dying thief."

John Bacon, the sculptor, dictated his own epitaph :

"What I was as an artist seemed to me of importance while I lived; but what I was as a believer in Christ Jesus is the only matter of importance to me now."

XII

THE FORESIGHT OF THE FUTURE

CHRISTIANITY rests its claim largely upon the predictions of future events, especially of the Messiah. If prophetic predictions, conformed to all the canons of criticism or laws of evidence, can be produced in support of the august claims of the Christian religion, they prove incontestably a knowledge and wisdom surpassing those of man, and therefore supernatural.

There are certain *criteria* by which a prediction is to be judged—conditions within which, only, a prophecy of future events could be of any real value in determining the divine inspiration of the seer; and the lines of limitation should be philosophically narrow and strict, in proportion to the dignity of the subject and the importance of the issue. When any man claims to speak with divine knowledge and authority, it behooves us, with corresponding severity, to test such claim, lest audacity counterfeit authority.

To make any such prediction clearly a supernatural revelation the following conditions must unite:

1. It must concern coming events which no mere human sagacity could conjecture or natural wisdom discover.

2. There must be details sufficiently many and minute to identify the prediction and its fulfilment, unmistakably.

3. There must be sufficient lapse of time between the utterance and the event, to preclude all agency of the prophet in bringing about the accomplishment of his prediction.

4. It would make deception the more impossible if there be an ele-

ment of obscurity or mystery in the prophecy, which only the history which fulfils it can fully interpret.

These, it will be conceded, are severe scientific demands, yet not too rigid for the settlement of a question so momentous in importance.

It is not enough, for instance, that a future event be forecast, unless there be about it something unusual, exceptional, or unprecedented. Uninspired predictions have been and will be made, for history repeats itself, and like causes are likely to produce like effects. Just as the weather may, with surprising accuracy, be predicted upon the basis of careful records of past years, and careful observation of present phenomena; so a philosophic historian or statesman may forecast political storms, national convulsions, and social revolutions by studying the annals of the past and watching the developments of current events.

There is a foresight due to insight, the insight again being due to intelligence and reflection. Many a prediction may thus be based upon the science of probabilities.

But the predictions to which Christianity appeals are almost wholly outside the range of probabilities. For many, and the most remarkable, of them there was no precedent. Nothing like them had occurred before, and what is foretold is most improbable in itself; as, for example, the desolation of Tyre, turned from the throne of the waters to a bare rock for fishers' nets; or the downfall of such imperial capitals as Nineveh and Babylon; or that Egypt, the highest of kingdoms, should become the basest. How improbable that a small, obscure people, like the Jews, scattered everywhere, and universally hated and persecuted, should remain separate from the nations with which they mingled, one people, even in their dispersion, awaiting a future of restored unity and prosperity! They love their own land, and it is loved by no other nation; yet they have had no footing there for many centuries, and all exactly as predicted thousands of years ago! Of all predictions those concerning the Messiah are most ample and most improbable. His birth of a virgin, his resurrection from the dead—such are some of the astounding impossibilities, humanly speaking, which were to characterize this unique personage.

Prediction must enter into details. A general forecast is not enough, for it admits of too general a fulfilment. To draw a large outline of future events, which almost any occurrence may fill in, is as easy as to outline a human face which resembles everybody in general because it is like nobody in particular; but every definite, specific particular added to a prediction increases by a geometrical ratio the impossibility of any chance fulfilment, just as the more minute the feature-painting of a portrait becomes the more decided and unmistakable the likeness to one individual only.

Scriptural predictions enter astonishingly into detail. In each case of most prominent subjects of prophecy there are from twenty to forty particulars; and, in Messianic prophecy, there are over three hundred minute details, making the chance of an accidental coincidence one in tens of thousands of millions!

A sufficient time must also elapse between the prediction and the event to prevent the speaker from being unduly an actor in the history he forecasts; thus leaving no chance for a scheming prophet to mould events so as to confirm his forecast. But, when he has long passed away, and can have no hand in the shaping of the history, he is entirely removed from the sphere of action.

Here again Scriptural predictions meet the conditions. There is remoteness of time, stretching from a score of years on to centuries. Imposture is impossible. The whole Old Testament was in the hands of Hebrew-speaking Jews four hundred years before Christ, and in the hands of Hellenistic Jews, in the Septuagint version, two and a half centuries in advance. Yet those predictions were not only exactly borne out by events, but are still in course of fulfilment before our eyes. Micah foretold the *place* of Messiah's birth, and Daniel the exact *time*, while other prophets told his *family line*, and many other minute details, all of which found exact correspondence in events centuries after.

The element of mystery adds much weight. When only the actual fulfilment can make plain the meaning of a prediction it argues that the foreknowledge of the event was supernaturally communicated, imparted in enigmatic form, to be understood only when the occurrences of history supply the key.

Messianic prophecies are largely of this sort. In Isaiah, fifty-third chapter, for example, there is a remarkable forecast of One who presented in himself a curious bundle of paradoxes:

A root out of dry ground: yet a fruitful branch.

Without form or comeliness: yet Jehovah's chosen servant.

Despised and rejected of men: yet the accepted Savior.

A sufferer unto death: yet not holden of death.

Without natural offspring: yet having a numerous seed.

Making his grave with the wicked: yet buried in the sepulchre of the rich.

Enduring all adversity : yet enjoying all prosperity.

Defeated and destroyed : yet triumphant and victorious.

Cut off in the midst of his days: yet prolonging his life.

The despoiled of men : yet himself dividing the spoil.

Condemned as a malefactor : yet justifying many transgressors.

These contradictions present a problem which no human wisdom was able to solve. They seemed to Jewish rabbis irreconcilable, unless there were to be *two* Messiahs, one suffering and dying, the other living and reigning, but both united in one great divine work. God meant the utterances of this prophecy to be obscure, like some great obelisk in Egypt, carved all over with hieroglyphs, waiting for centuries for history to become the Champollion that should decipher and interpret the strange records. *Now* the interpretation is plain and the paradox is gone. Jesus Christ, in His vicarious suffering and in His resurrection and ascension, has fulfilled both parts of the prophecy. But this makes clear that the prediction was framed by a higher mind than man's, and even the prophet himself did not understand the enigma he was recording for future ages.

The full force of this argument few really weigh. The severest canons of criticism, applied to Scriptural predictions, vindicate their authenticity and authority. These tests are so severe that Bible prophecies alone could ever have endured them. Other religions have been slow to claim the sanction of varied and minute predictions; they dare not risk a claim so audacious and easily exposed. The Bible calmly affirms, hundreds and thousands of years in advance, what is coming to pass, and then as calmly defies history, science, and all forms of human wisdom to prove these forecasts untrue!

Heathen oracles hid ignorance of the future behind ambiguity of utterance. The responses were sometimes trivial, and often venal, but more frequently tricky. They had an equivocal double sense, a back door for escape. The most famous oracles were those of Dodona, Delphi, and Trophonius; and next to them those of Jupiter Ammon in the Libyan deserts; of the Branchidæ, in Ionia; of Pella, in Macedonia; of the head of Orpheus, at Lesbos, etc. The importance, attached by both Greeks and Romans to oracular responses, forms a striking feature in their history; and scarcely any enterprise, private or public, was undertaken without in some way ascertaining the "will of the gods." Here was an opportunity, if any human wisdom could forecast the future, for the prediction of coming events. But what is the fact? Dodona's sacred oaks and brazen cauldron, Delphi's inhalations of vapor from the sacred fissure, Memphis' divine Apis, or bull —all failed to give clear revelations of the future. The responses were rare and hard to obtain, but, when the oracles did speak, all the artifice and adroitness of the priests were called into play to frame answers which would admit of a double meaning; so that, whichever way events should turn, it might be claimed that the oracle was right, but that the reading and construction of the responses had been wrong!

For example, Laius, warned by the Delphic oracle that he would be killed by his own son, exposed his new-born child, which was found and reared by the wife of Polybus, and, if Sophocles is to be trusted, Œdipus slew his father after himself consulting the same oracle. Crœsus was told that "by crossing the Halys he would destroy a great empire," but whether it was his *own* or the *Persian* empire he was not told. The oracle of Dodona encouraged the Athenians to "establish themselves in Sicily." They were thereby emboldened to engage in war with Syracuse, by which their downfall began, the oracle taking refuge in the pretext that the Sicily meant was a *small hill near Athens!*

By a response of similar ambiguity the Pythoness led the Lacedæmonians to engage in a war with the Tegæans, who put them to rout.* Epaminondas was warned to beware of *pelagos.* He interpreted the word to mean the *sea*, but the same word was also applied to a *wood* near Mantinea.

These and many other examples serve to show that the only spirit of prophecy that inspired the ancient oracles was that spirit of crafty imposture which always finds so congenial a home among an artful and cunning priesthood; so that *priestcraft* has long been a fit name to express the scheming intrigues whereby the credulity of the people was practised on and they were held in bondage to superstition.

---

* Herod, i: 66.

Dr. Middleton, in his "Examination," boldly pronounces these heathen oracles all a mere imposture, wholly invented and supported by human craft, without any supernatural aid or interposition whatever; and he does this from the authority of the best and wisest heathens themselves. Eusebius declares that six hundred authors among the heathen had publicly written against them. It became evident that every prediction was framed, susceptible of a double meaning, so as to make the veracity of the gods safe from impeachment; and hence, about the middle of the fourth century after

Christ, the oracles ceased to be appealed to, having, however, for centuries been sinking so low in the public esteem as very rarely to be consulted.

Christianity appeals to over seven hundred distinct predictions, and in not one of them can any approach to such fatal ambiguity or fraudulent trickery be detected. To frame such a body of prediction with definiteness, dignity, and accuracy is simply inconceivable without Divine help. Yet there these prophecies stand, and not a few of them are now in progress of fulfilment, the standing miracle of the ages.

Here is another Gordian knot, and it is difficult for skeptics to untie. Porphyry indeed tried a method very like Alexander's. He suggested that Daniel's prophecy of the world kingdoms, for instance, was so exact a forecast of history that it *must have been written after the events;* and this in face of the fact that, whatever date be assigned to Daniel, the whole Old Testament was in existence four hundred years before the birth of Christ, and that the history of the Roman empire had then but begun, so that all the events, prefigured in the *feet* of Daniel's image, must have occurred long after! Voltaire adopted Porphyry's method, as to New Testament prophecies of the destruction of Jerusalem; but, long after the New Testament was complete, the predictions concerning the sacred city continued to find fulfilment, as they do even yet in current history.

The Masoritic guards which Jewish learned scholars jealously set about the holy writings, even to the counting and recording of letters, made all trifling with the Scripture records difficult; and to account for Scripture prophecy without God is to assume a gigantic fraud with no adequate motive—a compound of hypocrisy, forgery, and perjury, of which only monsters could be capable. Men do not combine in such huge imposture and then accept a martyr death as the price of upholding it! Such a theory presents a greater mystery than the problem it attempts to solve! It is easier to believe that holy men of old spake as moved by the Holy Spirit of God than to believe that monsters of wickedness conspired to cheat the human race by uttering such sublime predictions, and venturing everything, even to life itself, to uphold them!

XIII

THE PROBLEM OF THE BOOK

If it is difficult to account for creation, without a divine Creator, it is scarcely less so to account for what Chrysostom called "The Bible" (The Book) without a divine Author.

Looking into the heavens, the distances and dimensions, periods and orbits, there suggested, hint the infinity, immensity, eternity, omnipresence, and omniscience of the majestic Being to whom these worlds owe their existence. So, in that other firmament of the Holy Scriptures, we find similar suggestions not only of God's natural but of His moral attributes. We have revelations of His omniscience, as in prophetic prediction ; of His omnipotence, as in miracle working; of his omnipresence, as in the unity found there in diversity; of His eternity, in the vast period through which this Book was preparing; of His infallibility and immutability, in the finality, authority, and certainty of its utterances; of His righteousness and holiness and truth, in the exalted majesty and morality of its teachings. The Bible is a revelation of a divine Author who combines infinite wisdom and power with the highest moral excellence and beauty.

The main statements just made are *not disputed*, even by most antagonists of the Bible as a supernatural book. It is surprising to how large a degree even the enemies of Christianity, as a Divine religion, frankly concede the unsurpassed worth of the Bible as the foremost of all books. How are we to solve the problem of its origin?

The argument has been briefly put

thus: "The Bible must have been produced either by good men or angels, by bad men or devils, or by God Himself. Good men or angels could not have produced it, for they would not impose on men a fraud by claiming that it is a Divine revelation; bad men or devils could not produce such a book, for it is obviously above their level in its moral and spiritual teachings; and hence the only alternative is to accept it as ultimately of Divine origin and authority." Peter wrote that "Holy men of old spake as they were moved by the Holy Spirit." This gives the only satisfactory solution of the problem.

Many features about this remarkable Book present a knot of perplexity so long as its Divine authorship is questioned. It is a library in itself. There are two general divisions, called the Old Testament and the New Testament, separated by an interval of four centuries. Each of these parts is complex. The former is a compilation of thirty-nine books; the latter, of twenty-seven. The authors are some forty, and the subjects are various. We have history and poetry, laws and lyrics, prophecy and ritual; and yet, with all this diversity, a singular unity that reminds us not so much of one mechanism as of one organism, for the unity seems vital. The dependence of one part on another for its real completeness and ready interpretation resembles the interdependence of the members of an organic body, each of which has its own place yet is necessary to every other, so that its removal would be mutilation—mayhem. Links of connection reach from one part to another, like the nerves of the human body. We observe a progress of doctrine that runs through the whole, from Genesis to Revelation. Where one writer leaves a theme another carries it on, as tho the two had agreed together and made a common plan; and yet such writers may have been separated by over a thousand years. There seem to be in this Book currents of life that remind us of the circulation of the blood, or the double action of the nerve system. And as in the body there are not only currents of life but a circle of life, a return of blood to its source, so there seems to be in the Bible a definite course of development, a movement forward and yet backward, so that, what we left in Genesis—the original creation, Eden, with its Tree of Life, River, Purity, Innocence, and Divine companionship—these we come back to in the new creation at the close. If we admit what this Book claims, that one Divine mind, spanning the ages, guided all the writers, so that, whoever held the pen, He was the true

Author, there is no difficulty. We have untied the Gordian knot. The unity in all this diversity is just what we should expect. The human writers were the instruments of a Higher Power and simply carried out His unique and eternal purpose.

The moral or ethical character of the Bible upholds and confirms all its other claims, and itself constitutes the highest claim to a Divine authorship. As an ethical teacher the Word of God has not only no conceded superior but no rival competitor. Its standard of perfection is celestial, yet it is adapted for a terrestial sphere. It is clear and intelligible to the average man, and adapted to all men everywhere, and consistent in all its parts and precepts. It is original in the moral heights which it suggests and the new ethical conceptions it embodies. Its ideals are so far above man's invention or origination that the language, even of the most cultured peoples, has had no adequate terms to express some of its lofty ideas, such as humility, forgiveness, holiness, disinterested benevolence, grace. It has about it a certain impenetrable cloud of mystery, as would be expected if its author is the infinite God, yet the mystery never obscures duty, as might equally be expected if God gave the book to man as a practical guide.

We recur again to that great consideration which ought never to be lost sight of in weighing the claims of this Book upon human acceptance. Natural philosophers are fond of discoursing on the "correlation of force and energy." The mutual adaptation of the eye and the light, for example, proves that each was made and meant for the other. There is a mutual moral adaptation between man and the Bible. This Book proves itself meant for man's moral being, for, in proportion as we find the purest moral tone in character, do we find acceptance and approval of the Bible as a book of ethics, as light is pleasant to a healthy eye. And, as surely as the moral nature is perverted, debased, diseased, in just such proportion do men avoid the Bible as an inflamed eye shrinks from pure sunlight.

How does it come to pass that the heathen gods incarnated vice as well as virtue, so that Olympus was a model only for the most corrupt and licentious court? The heathen religions can not be divine, for they give us gods that only carry on sensual intrigues and domestic squabbles and revengeful plots on a larger scale. In this Book are eternal principles of right and wrong, and the divine Author challenges us by them to judge not only His Book but Himself. If the Bible represented God as embodying one essentially immoral principle or practice—such as lying, lust, vindictiveness, carnality—if His decalogue laid down one unrighteous precept for man's guidance, there would be a blemish on the Book and its Author which no merits could atone for and no miracles hide. But even the foes of Christianity confess that its moral teaching is incomparable.

Reville, an advocate of French rationalism, says: "One day a question was raised in an assembly, what book a man, condemned to life imprisonment, would best take with him to his cell; and from Catholic, Protestant, philosophers, and materialists came alike the one reply in which all agreed: 'The Bible.'" *

Yet another consideration should have full weight. Millions of honest people claim to have made the *experiment of faith* and to find it satisfactory. If Christianity be not genuine, how shall the experience of believers for two thousand years be explained?

---

* McIlvaine's "Evidences," p. 334.

The crowning test of any system is found in its practical fruits, and it is this test which the Word of God challenges us to apply. If any one doubts, like Nathaniel, whether any good thing can come out of Nazareth, its answer is, "Come and see." If it be doubted whether God offers men a satisfying good, the appeal is "Taste and see." Argument is only one way of reaching a conclusion; experiment is a shorter and often more satisfactory way of getting to the same goal of absolute conviction. Argument is complex and frequently misleading. It has been often used to befog the simple mind, as by the Greek sophists. To conduct a process of logical demonstration may require no little mental training, and research into languages, history, philosophy, and theology. But experiment is open to all. It is simple, safe, satisfying; and if made in the department of the religious life, soberly and not frivolously, honestly and not in the caviling spirit, will lead to sound conclusions.

If men are to be believed, the Bible and Christ have been put to the test of faith in countless cases and by all classes of men and women, and has been found to justify its claim.

On the other hand, infidel experiments are far from satisfactory. If the confessions and concessions of professed skeptics could be collated and arranged in a volume, the testimonies would be found quite as striking in favor of Christianity as the witness of its professed friends. For example, Rousseau emphatically conceded that the Gospel has characters of truthfulness so striking and so perfectly inimitable that "its inventor would be more astonishing than its hero."[*] Napoleon admitted that, "between Christ and whoever else in the world, there is no possible term of comparison." Johann von Muller, a skeptical historian, accidentally taking up the New Testament, suddenly finds in Christ the explanation of all history.[†]

But the highest results of experiment are attainable only by those who enter into the life of faith. Nathaniel Hawthorne says, "Christian faith is a grand cathedral with divinely pictured windows. Standing *without* you see no glory nor can possibly imagine any; standing *within* each ray of light reveals a harmony of unspeakable splendor."[‡]

Moreover, moral miracles continue to be wrought—changes of character, so marvelously complete and revolutionary that they defy a natural explanation. The Bible is itself a miracle. All its noblest moral and spiritual teaching opposes the natural heart of man, is in sharp conflict with the caste spirit, with selfishness, worldliness, wickedness. And yet the Bible is to-day more widely loved and closely read and by many implicitly obeyed than ever.

---

[*] Rousseau's "Émile," liv: 4. Œuvres compl. 1793. vol. xxxvi: 39.

[†] Farrar, 80, 81.

[‡] "Transformation," p. 262.

To sum up, then, the argument of these two chapters, Christianity rests its claim to being a Divine religion largely on two grounds: the witness of predictive prophecy, especially to Christ as God's Messiah and man's Savior; and the witness of the moral miracles, seen in the character and influence of the Bible.

Prophecy is close akin to miracle, for it is itself a miracle of knowledge; and as it is a miracle which is constantly being wrought, its fulfilment being before our eyes, the force of this argument is perpetually growing.

The Christian religion bases its claims upon a vast number of prophecies relating to different times, periods, persons, events. The argument had tremendous weight when the first prediction was fulfilled, and every new fulfilment added new weight—the rill thus swells to the river and the river to the resistless flood of evidence. All through Old Testament times prophecy was fulfilling, till in Christ the rays of prophecy converged; but this age of fulfilments became a new age of prophecy, and so current events are adding to the force and weight of this grand argument. The age of miracles is never passed, for, in the history of Jew and Greek, Persian and Roman, in the ruins of Tyre and Nineveh and Babylon, we have miracles wrought before our eyes. But the regeneration of human character under the influence of Christianity is a miracle of power, not of knowledge, and it is the standing proof of the Christian faith, as of God.

XIV

THE PROBLEM OF THE GOD MAN

ANOTHER Gordian knot confronts the infidel in the *person of Christ;* and, if infidelity's philosophy be rational, He remains an insoluble mystery, the personal enigma of the ages.

If all history, as Carlyle hints, is but the "lengthened shadows of great men," here is one great personage whose shadow is already fallen lengthwise over nearly two thousand years, and rapidly reaching breadthwise over all the round world.

The question, therefore, "What think ye of Christ?" can not be evaded. Intellectually, He is related to the best thought of the race. The Bible leads all literature, and He pervades the Bible. Genesis opens with "the seed of the woman," and Revelation closes with the "Lamb on the throne." He is the center of Old Testament prophecy and ritual and symbolism: He is the center of New Testament history, worship, and activity. In the Word of God over three hundred names and titles belong to Him. To Him the master minds of the ages, Paul and John, Chrysostom and Origen, Augustine and Athanasius, Calvin and Luther, Wesley and Newton, Jonathan Edwards and Michael Faraday, have united to render homage. The Corsican conqueror saw in Him the greatest of Human victors, because love was his only force or weapon, his success was not dependent on visible leadership, and he constrains men to voluntary and unreserved surrender, and these conquests continue and actually widen, after eighteen centuries of His personal withdrawal.*

---

* Schaff's "Person of Christ."

Morally, Christ is the world's center. Nothing is good in any of the ethical systems of men that is not found in His teaching in greater perfection. He is like Aaron's rod that swallowed all the others and was the only one that budded. There is much in his moral system found nowhere else, and there are no foreign admixtures or alloys to corrupt its purity. And, withal, such unity, symmetry, completeness, sublimity, that it is not too much to say of Him that He rises above all the most colossal figures of history, and, while he borrows no luster from any other, He sheds luster on all others.

King Ptolemy Philadelphus built his famous lighthouse on Pharos. It was four hundred feet high and stood sixteen hundred years, and the perpetual fires on its summit were visible forty miles. But what a poor image this of Him who after all these centuries still stands at the entrance of human life, the light of the world! Kingdoms have risen and vanished and scarce left a wreck behind. Where are ancient Egypt, Nineveh, Babylon, Tyre, Persia, Greece, Rome? Art and culture, law and prowess, could not save the foremost nations of the old world. Yet here is a kingdom against which from the first all the powers of earth and hell have been arrayed, but the invisible throne of God and of the Lamb is set up to-day in more hearts than ever, and the Conqueror is still riding on his white horse of conquest.

There is no avoiding the issue. Jesus Christ is all or nothing. If He were not divine, His claims would reach the summit of blasphemy, audacity, and atrocity. There is no middle ground. Some who have sought to account for Christ and not concede His supernatural character, have attempted to blind men's eyes by such a grand sophism as that "every nation has created a God." But no nation has invented any *such* God as Jesus Christ of Nazareth. The ideal moral standard is found nowhere but in Him.

M. Guizot says that he was a rationalist in religion, until he undertook the preparation in press of an edition of Gibbon. The investigations, necessary to prepare notes for this edition, led him to accept Christianity as a system that could not be explained by purely human forces.

"His word was with power."

As a purely *scientific* question, the mystery of the influence of Christ's words demands an adequate solution. We need not stop to discuss their miraculous power, in healing, or even in raising the dead. The honest doubter may not see his way clear to the investigation of a matter that requires him to go back eighteen centuries for his data; but what shall he do with the dynamic force of Christ's words as an existing factor in modern society? On what principle, scientifically, can skepticism rationally account for the present power of the words of One who at a distance of nearly two millenniums of history is still moulding human thought, attracting human love, transforming human lives with such omnipotent sway, such infinite potency, that He stands out from all other thinkers and teachers as the sun makes the stars recede into dim distance and pale their luster at His coming! How comes it to pass that the words of the Nazarene have pervaded all the breadth and depth of our social life as the mysterious emerald tints the sea, and the saline element seasons its waters! Shakespeare's writings so saturated the whole intellectual life of Richard Porson that he could converse on all subjects and for days together in the phrases of the great English dramatist. But to-day, go where you will throughout the Christian world, and wherever Jesus Christ is known you will find those whose prayers to God and preaching to man, and whose very lives themselves, breathe a Scripture dialect. The words of Jesus have interpenetrated our literature, so that at least one-third of it is either in the defense and exposition of the Christian faith, or in some way takes from it its tone and temper ; and even the controversial literature, written to antagonize the imperious claim of the Christian religion, exhibits the unconscious mark and impress of its moulding influence. It would have been impossible to produce the high-toned ethical system of infidel philosophers had Christ never been !

And so are there no limits or bounds either of time or space to the dynamic force of Christ's words! It was said of Beecher that his auditorium was a continent and his sounding-board the Rocky Mountains. Grattan said of Fox, that his genius was not confined to England, but reached to Ireland, Africa, America, and in one grand sentence summed up by declaring, "You are to measure the magnitude of his mind by parallels of latitude!" With far greater truth and emphasis may we affirm that no human measurement can be applied to the influence of Christ's teaching. You may follow it through the centuries, and even the cycles of time, and it actually grows instead of diminishing; and you may in vain seek to bound it by parallels of latitude or meridians of longitude. Some may dispute the reality of the miracles he is said to have wrought on disease and deformity, on the demoniac and the dead; but the standing miracle of the ages is this, which no candid man can dispute: the most colossal fact that fills the world's horizon today is Christianity! As the great Teacher of Judea recedes into the distance, His image becomes more gigantic in dimensions and more distinct in impression. As the dynamic energy of His words extends and diffuses itself, we should expect on scientific principles a corresponding weakening of the original force; but Christ's influence is far greater in the nineteenth century than in the first; the number of his disciples has multiplied a millionfold; and the stone, cut out of the mountain without hands, like the barley loaf in the dream of the Midianite, which rolled against the tents of Gideon's foes and smote them to the earth, is slowly but surely grinding to powder the hostile kingdoms of this world!

If a new mechanical force should suddenly appear in this world, capable of corresponding dynamic results, the whole scientific world would be alive with intense interest to study its nature and account for its effects. On a purely scientific basis we may claim the right to demand a sufficient philosophy to account for this wonderful force in moral and spiritual life that disdains all common limitations, transcends all rival claims and contradicts all ordinary experience! There is but one hope of untying this Gordian knot —if this power be of *God*, essentially divine, then we are at no loss to account for its omnipotence and omnipresence. On any other supposition the mystery only deepens—it requires neither science nor philosophy to *deny*, tho it may, to *explain*. And until a better solution to the enigma of the ages can be furnished, millions of believers rest content in their sublime faith.

Miracles present a stumbling-block

to all unbelievers. It is not needful to make exact definitions, but for our present purpose we use the word miracles as standing for whatever is so above the power of man to effect, and so out of the natural order, as to imply the intervention of Divine power. All other miracles recorded in the Bible may be passed by that we may concentrate attention on one—*the resurrection of Christ*. To admit this suffices to establish the principle, and all lesser miracles are rendered possible and credible when the greatest is conceded. This is therefore made the key to Christian truth and faith.* Yet so abundant, varied, satisfactory, are the evidences of this event, that Archbishop Whately did not hesitate to declare that no historic fact is better attested. The methods whereby such evidence is set aside, when the witnesses are so numerous, competent, consistent, and trustworthy, and where the tests they applied were so convincing, would serve to discredit *any* occurrence whatever which history records. Hence, again, Whately's brilliant satire on "Historic Doubts Concerning the Existence of Napoleon Bonaparte," in which he showed that, by the same methods used to discredit Christ's resurrection, the existence of Napoleon might be discredited. Yet, be it remembered that if the resurrection of Christ be conceded as a fact, two results follow: First, it makes all other miracles recorded in the Bible credible, as the greater includes the less; and, secondly, it sets the seal of the greatest of all miracles upon Him as being what He claimed to be—the Son of God and the Savior of the world.

---

* 1 Cor., xv.

XV

THE THEISTIC SOLUTION

HAS the complex problem we have been considering *ever been solved?* There is a theistic conception of creation, of man's origin, highest interest and destiny, of the Bible and all problems of sin and salvation, and of the Christ, which has had for many centuries, as we have seen, an immense and intelligent body of adherents. It is now incumbent on us to ask, whether this mode of untying the knotty enigmas of the race comes any nearer than the infidel theories to a true solution of the difficulty.

The substance of the theistic theory of creation, already given in the brief words of the Bible, is: "Every house is builded by somebody; but He that built all things is God." * The universe is conceived as a vast house, or structure, and the question naturally arises, Who is its architect and builder?

In this universal house, we find, first of all, *matter*.

The most searching analysis fails to discover the essence or origin of matter. We may, however, learn some of its properties and qualities. For example, ice is reported by our investigating senses, as solid, hard, cold, smooth, crystalline, and transparent; subjected to heat, it becomes soft and liquid, then a visible vapor, then an invisible gas, and finally develops a tremendous explosive force. Here, while the matter obviously remains, throughout, unchanged in essence, it so changes form and properties as to be scarcely recognizable. On the last day of 1877, gases under forcible compression and at a very low temperature, were reduced to a liquid form, and, a little later on in the history of science, air was compressed into a solid. Many scientists declare the two essentials of matter to be these: it is, by finite agency, both *uncreatable* and *indestructible*.

---

* Hebrews, iii: 4.

Atoms are assumed as the basis of all material forms. Yet even atoms are "manufactured articles"; they were *made;* and, out of them, by combination, all material substances have been formed. The atoms, therefore, have still to be accounted for, before the problem of matter is solved.

Behind matter and its constituent atoms is found something associated with all material forms—namely, what is known as *force* or *energy*. It is invisible and intangible, traceable only by its working, its effects and results. Its various aspects are light and heat, attraction and repulsion, motion, electricity, chemical affinity, etc.; and by this force the atoms are combined, repelled, united, divided, set in motion, and crystallized or organized into new forms.

The theistic theory makes matter to have been created, in its atoms, by the absolute and original power of God; and makes the force and energy, of which matter is the vehicle, to have originated in Him, and to be a manifestation of His will, personality and power, as Himself the dominating energy of the universe.

Law is another marked feature of the material universe, and is used as a convenient word to express the regular, orderly, systematic way in which force or energy manifests itself and operates through matter. For example, in water, oxygen and hydrogen unite, showing a law of combination; and other natural phenomena reveal laws of motion and rest, attraction and repulsion. These various forms of working all exhibit laws or fixed modes of working—as, for example, the law that attraction is directly as to mass, inversely, as the square of the distance.*

According to theism, law is not the working of chance, but the expression of the reason, intelligence, and wisdom of a divine Creator, as the mode of combining and applying colors, in a painting, exhibits the similar attributes in a master artist. The word law, if from the same root as "lay," means something *laid down*—that is, as a principle or method of working. "Lord" is a contraction of "law-ward"—guardian of law. No law can be self-originating, self-operative, or self-effective; it implies a law-maker and administrator; as Hooker says, "Law has its center and seat in God."

---

* Dr. L. C. Moss.

Back of matter, atoms, force, and law, lies a deeper mystery—LIFE. This is the subtlest of forces, defying dissection, analysis, or even investigation; only to a very limited degree can it be traced or controlled. He who attempts to penetrate to its inner chamber, only finds when he gets there—DEATH! Through the door which was opened to search for it, life has fled.

In the various realms of matter Life seems to be different. In the mineral kingdom, if life there be, it is found simply in the fact that matter *is*, and has adhesion, cohesion, affinity, crystalization and stratification. In the vegetable realm, life is manifested in the cell, and, besides existence and motion, we trace growth and development, and reproduction, none of which are found in the mineral realm.

In the animal realm there are all these, and something more—intelligence of a higher order—self-will, and the action of a mysterious force, called *Mind*, reaching only in the human realm its fullest activity and majesty. The origin of life, that ethereal force which lies back of all else, is yet an undiscovered secret. One thing we have found : *It takes life to produce life.* Life is never evolved out of death. All living plants and animals are derived from an antecedent life. Hence the theist concludes that all life points back ultimately to one great Life-Giver, and finds its origin in God, the Creator.

In a similar way theism traces the *plan*, everywhere discovered, to a Divine mind, with infinite intelligence and wise purpose. It refuses to accept the materialistic genesis, which affirms that "In the beginning an imperial quart of oxygen created the heavens and the earth," * or that such consummate perfection of order was the outcome of chance. The theist contends that the universe can not be "a fortuitous concourse of atoms" any more than could the Parthenon at Athens or the Pantheon at Rome. Even the smallest products of nature, such as a grain of wheat, exhibit the forces of nature at work in an orderly way, in the sunshine and soil, the air and the dew, gathering and arranging, combining and separating, and then assimilating—all for a purpose, and that purpose the production of other like grains of wheat. It seems natural and sensible to conclude that such orderly system is the sign and work of a divine creative Thinker, of whose thought the universe is the realization and materialization.

---

* Rev. Nathaniel West, D.D.

Tillotson asks, "How often might a man, after he had jumbled a set of letters in a bag, fling them out upon the ground, before they would fall into an exact poem, yea, or so much as make a good discourse in prose?'' or, as Rufus Choate tersely put it, "Can a man drop the Greek alphabet and pick up the Iliad?'' Captain James B. Eads said to those who carried out his plans, using seven years —from 1867 to 1874—in constructing the great steel bridge across the Mississippi, "I built the bridge before you did!'' The theist reverently holds that, in the mind of God, this universe was built before the first star shone. To him, creation is but the revelation of an intention and conception in the Eternal One. In such antecedent plan, original purpose, and wise design, the theist finds the highest expression and exhibition of personality, and hence Nature's every voice speaks to him of a Divine and infinite person. The things which are seen are not walls to shut out, but windows to let in, the conception of a Creator, and by such vision develop in the observer both intellectual and moral perfection of character.

To the theist, God is "the fountain of all life," and therefore the solution of that last and greatest mystery. "In Him we live and move and have our being." There is no "spontaneous generation" until we get back to Him. He implants the instinct in the plant and in the animal, and the higher intelligence in man. The Bible is God's Book, if not the best He could make, *the best for its purpose* as man's guide in truth and duty. Here as elsewhere the standard of excellence is fitness to its end.

And so theism, guided by the inspired Word of God, unties finally the knot of our perplexity. All the theories of the materialist, atheist, pantheist, are so many "inventions" "sought out" by man as devices to get rid of a God. "Natural law" substitutes for the Worker His mode of working. "Development" evades entirely the question of the origin of all that develops. The mechanical "clockwork" theory supposes a perfect mechanism, without any mechanic to construct, or engineer to conduct it. "Spontaneous generation" forgets the fact that never yet has life come out of death. The "eternity of matter" is a theory that simply pushes back the mystery of the origin of all things into an indefinite past. And the preposterous doctrine of "chance," taught by Epicurus, invests accident with all the attributes of deity, except the name.*

Life itself is an interrogation point: it seems to be forever asking, "Whence am I?" The living being, even the living thing, compels us to inquire after the living God. After all man's quest after truth, and especially after the truth as to the origin of all things, how refreshing to come back to the Bible and read its opening verse: "IN THE BEGINNING—GOD." And then to read on—"*God created the heavens and the earth.*" Here is an answer to man's questionings and a resting-place for his investigating intellect. We read on a little further:

---

* "Rambles Among Insects," Samuel Findley, p. 74.

> "And the Lord God formed man out of the dust of the ground;
> And breathed into his nostrils the breath of life;
> And man became a living soul."

That is sublimely simple and satisfactory, and has the ring of true coin. There is none of the hollow clangor of the sounding brass of human invention or the shallow tinkle of the cymbal of a superficial guesswork. It peals out like the solemn chimes from eternity's belfry. Even the evolutionist feels the need of something to be evolved and of some One to evolve it. Professor Guyot used to say there are "three miracles: the beginning of life, the beginning of intelligence, and the beginning of conscience;" and the most complete evolution hypothesis leaves these gaps unfilled.

There is, in all philosophical investigation, a well-known canon, *the law of adequate hypothesis.* It embraces two propositions:

1. Any hypothesis which, being applied to facts or phenomena as observed, satisfactorily accounts for them all, may be safely accepted as true.

2. When such hypothesis is not adequate to explain all facts or phenomena, it may be scientifically held as the nearest approximation to the truth until a better is framed.

For example, Kepler tried eighteen different hypotheses to unlock the mystery of planetary motion before he found one that fitted all the facts. The supposition of a circular orbit approximated the true solution, but only the elliptical path, with the sun at one of the foci, at last gave him the true key to the heavens.

Theism supplies the only adequate hypothesis, not only for the solution of the material, but of the moral problems as well. Had we no other knowledge of God than that deduced from scientific observation, we might be in doubt as to His moral character and attitude toward man. The highest natural religion taught *dualism*—two antagonistic powers, one benevolent and the other malevolent. And, but for a supernatural revelation, we could not have had those high conceptions of the ministry of suffering which make it not only consistent with God's goodness, but an evidence of His love.*

---

* Hebrews, xii: 1–10.

From the desolations of skepticism we turn to the consolations of the Christian faith, as from a desert and a ruin to a garden and a home.

The corypheus of modern infidelity, standing at the grave of one he loved, said, " Life is a narrow vale, between the cold, bleak, dark peaks of two eternities ! Humanity cries aloud, and the only answer is the echo of its bitter wailing ! " The Christian answers, " Life is the vestibule to another and an immortal existence, and death is its gateway. We sorrow not as others who have no hope." The atheist, like Phillippe d'Orleans in prison, may seek to divine his fate by means of grounds in a coffee cup ; but Paul could say, "I know whom I have believed," and look confidently for the new mansions in the Father's house which Christ has gone to prepare.

At a lecture on immortality a

Christian believer was interrupted by a materialist, who openly declared his belief in the entire extinction of being at death. "Come up here," said the lecturer, "and let the audience see a man who believes that his mother died, like a dog, and that is the last of her." "You lie!" shouted the materialist; "she was a good woman and is in heaven!" He forgot his infidelity for the moment as he remembered his saintly mother. And when a deaf mute child saw written on a blackboard by an atheist, "God is nowhere," with singular but sublime tact he stepped to the board and wrote his new version, "God is *now here!*"

Infidelity which decries a supernatural revelation offers us poor substitutes for it. Here are a few questions and answers from a catechism, by a French author, who has been very zealous in the propaganda of free thought. The italics are the author's own:

Q. What is God? A. God is an *expression*.

Q. What is the exact value of this expression? A. The exact value of the word *Nature*.

Q. What is Nature? A. It is the material world, and ALL is matter.

Then, after taking up specifically the question of the existence of God, and asserting that the learned have all been agreed in denying it, he goes on:

Q. How is it, then, that there are gods? A. Because man has invented them.

Q. What is the soul? A. Nothing.

Q. What is the distinction between soul and body? A. It is a simple analytic process.

Q. What is generally understood by the word soul? A. Thought independent of matter.

Q. Can such independence exist? A. No; since everything belongs to the material order.

Q. What is man? A. Man is one of the most favored products of the earth; but Nature makes no more account of him than of the smallest insect. In consequence of his material conformation, he possesses a larger measure of intelligence than any other animal.

Q. The materiality of the soul, then, involving its negation, there is no future life? A. No!

No God, no soul, no future life, no moral law, the natural passions and propensities the only and proper guide for human conduct! This is free thought.

The philosophies of men, even where not antagonistic to theism, do not solve our problems. Progressive ethical discovery resembles walking in a treadmill, where with all the activity of the feet there is no getting on or up, but merely a constant return to the point of departure—revolution of a wheel on the same plane.

"Let us hear the conclusion of the whole matter," said Solomon. "Fear God and keep His commandments—for this is the whole man." This makes a symmetrical, spherical character.

It seems to us that the Author of the *Cosmos* and of the *Logos* must be one and the same. There inhere in both the same symmetry, grandeur, and glory, the same marks of an Infinite mind. The two seem to be complementary to each other—the natural universe revealing God's natural perfections, while the Bible, which is the expression of His will, the revelation of Christ, and the embodiment of His teaching, discloses those moral perfections which nature, at best, hints only, as in a mirror, obscurely and enigmatically.

The theory of a personal divine Creator offers a resting-place for the reason. It accounts for the marks of intelligent forethought and workmanship; for the origin of life, of intelligence, of conscience; it accounts for matter and mind, and that master combination of both—MAN. It accounts also for the Bible and all its wonderful unveilings of truth, and lifts the veil from the great world beyond sight and sense and beyond the portals of death. And it is not strange that, notwithstanding all the war of the ages against Christianity, there are to-day more believers in the God of the Bible than ever, for the human heart has always been restless till it has found rest in this sublime faith.

Somebody once complimented John Randolph on a speech he had made in the House of Representatives, adding, "It has not been answered." "It was not made to be answered," was the significant reply of the great statesman of Roanoke. And of the arguments for a God, and for a supernatural revelation, it may likewise be said, they have never yet been answered; they were not *made to be answered.*

To millions the theistic solution has been so complete an answer to all their questionings, and satisfied not only their minds but hearts so fully, that martyrdom has not been too great a price to pay for their faith. On February 25, 1638, in Greyfriars Church, in the Scottish Athens, the Earl of Sutherland set the example of signing the national covenant. Then it was borne out into the churchyard, laid on a raised horizontal gravestone, and a mighty band, not content to sign it with ink, opened the veins in their arms and dipped their pens in their own life blood, in token how freely they would shed that blood when the battle day came—and nobly did they redeem their pledges.* Millions are ready to follow their example and not only sign with blood their covenant with the unseen God, but with the last drop redeem their covenant vows.

At Florence, in the museum, is a chamber, known as "The Temple." In its center stands the statue of the great Florentine who first turned a telescope to the sky, and around that stately figure are arranged the busts of great masters in science and art, facing toward him who was prince among them all; and the walls shining with precious stones, and the ceiling, glowing with glorious frescoes that picture forth the great events of his life, cast rays of splendor on the head of Galileo.

---

* "Life of Thomas Guthrie," i: 363.

There is another temple, around whose outer circles constellations mutely march. It is the shrine and fane of the unseen Creator. With radiant fingers all things point toward one central figure veiled from our grosser senses, and around Him the universe ceaselessly revolves. All His works demonstrate a master Workman greater than all He has wrought, equal to the planning and building and decorating of such a fane. A creation whose dimensions span the infinities and whose durations span the eternities demands a correspondingly great personality behind it. And so again, as in the twenty-ninth Psalm, that oldest tribute to Nature as God's cathedral, we read:

> "And in His temple doth every whit shout glory!"

Shall man withhold the glory which even Nature yields to the Creator?

APPENDIX

THE following books may be found helpful to those readers who wish to pursue the lines of thought followed in this discussion :

Two Spheres of Truth. T. E. S. T. T. Fisher Unwin, London.

Typical Forms in Creation. Dr. McCosh. 1876.

The Supernatural in Relation to the Natural. Dr. McCosh.

The Analogy of Religion to the Constitution and Course of Nations. Butler. 80c. Revell.

Fables of Infidelity and Facts of Faith. Robert Patterson. $1.75. Western Tract Society.

Agreement of Science and Revelation. Dr. J. H. Wythe. Lippincott. 1879.

Cause and Cure of Infidelity. Nelson. 75c. American Tract Society.

Religion and Chemistry. Josiah Parsons Cooke. $1.50. Scribner.

The Unseen Universe. Stewart and Tait. $1.25. Macmillan.

Modern Atheism. Buchanan.

"Pater Mundi." E. F. Burr, D.D. 2 Series. Each, $1.00. American Tract Society.

"Ecce Coelum." E. F. Burr, D.D. $1.00. American Tract Society.

The Hand as Evincing Design (Bridgewater Treatise). Sir Charles Bell.

The Wonderful Law. H. L. Hastings. Cloth, $1.00; paper, 30c.

Higher Critics Criticised. R. P. Stebbins and Hastings. $1.50.

Anti-Infidel Library. H. L. Hastings. Loizeaus Brothers, New York. 1891.

Spiritual Law in the Natural World. F. W. Grant.

Reason and Faith. Rogers.

Eclipse of Faith. Rogers.

Six Days of Creation. Tayler Lewis. $1.25. W. F. Draper.

Recreations in Astronomy. Warren. $1.25. American Book Co.

Planetary and Stellar Worlds. Mitchell.

Popular Astronomy. Mitchell. 80c. Routledge & Co.

Religious Truth Illustrated from Science. Hitchcock.

Footprints of the Creator. Hugh Miller. 60c. Hurst & Co.

Testimony of the Rocks. Hugh Miller. 60c. Hurst & Co.

Elements of Zoology. Tenney. $1.60. American Book Co.

The Fairy Land of Science. A. B. Buckley. $1.00; (Buck Ed.) $1.50. D. Appleton & Co.

Life and Her Children. A. B. Buckley. $1.50. D. Appleton & Co.

Modern Doubt and Christian Belief. Christlieb. $3.00. American Tract Society.

Nature and the Supernatural. Bushnell. $1.50. Scribner.

The Limits of Religious Thought. Mansel.

Anti-Christian Supernaturalism. McKenzie.

Historic Doubts Concerning Napoleon. Whateley. 75c. Putnam.

Is Science Guilty? A. H. Forbes. Marshall Bros., London. 1897.

The Book Wonderful. Forbes.

"Is the Bible Inspired?" James H. Brookes. Cloth, 50c.; paper, 25c. Revell.

Ten Reasons Why I Believe the Bible is the Word of God. R. A. Torrey. 15c. Revell.

Credulity of Incredulity. Pierson. 10c. Presbyterian Board of Publications.

Lines of Defense of Biblical Revelation. D. S. Margouliouth. Hodder & Stoughton. 1900.

Evidences of Christianity. Paley. 75c.

The Witness of the Psalms to Christ and Christianity. Bishop Alexander. 5*s*.

Evidences of Christianity. Charles P. McIlvaine. 90c. American Tract Society.

Evidences of Christianity. Mark Hopkins. $1.50.

Historical Evidences of Truth of Scripture Records. Rawlinson. $1.25.

Supernatural Origin of Christianity. George Fisher. $2.50. Scribner.

Divine Origin of Christianity. R. S. Storrs. $2.00 *net*. Pilgrim Press.

The Prophecies. Alexander Keith. 75c. Presbyterian Board of Publications.

The Divine Unity of Scripture. Adolph Saphir. $1.50. Revell.

Christ in the Scriptures. Adolph Saphir.

The Inspired Word. Pierson. $1.25. Christian Alliance Publishing Co.

Many Infallible Proofs. Pierson. $1.00. Revell.

Progress of Doctrine in the New Testament. Bernard. $1 00. American Tract Society.

Daniel in the Critics' Den. Robert Anderson. Revell. 1901.

The Impregnable Rock of Scripture. William E. Gladstone. $1.50. Scribner.

None Like It. Joseph Parker. $1.25. Revell.

The Ages Before Moses. Gibson. 75c. Lentilhon.

Why Four Gospels. Gregory. $1.00. Funk & Wagnalls Co.

Facts that Call for Faith. David Gregg. $1.00. E. B. Treat & Co.

Credibility of Scripture. Lardner.

Undesigned Coincidences of Old and New

Testaments. Blunt. $1.50. Loizeaux Bros.

The Divinity of Our Lord. Canon Liddon. $2.00. Longmans.

The Witness of History to Christ. Canon Farrar. $1.25. Macmillan.

The Christ of History. Young. $1.00. American Tract Society.

The Person of Christ. Schaff. $1.00. Scribner.

Philosophy of the Plan of Salvation. Walker. 75c. Methodist Book Concern.

Boston Monday Lectures. Joseph Cook. 10 volumes. $1.50 each. Houghton, Mifflin & Co.

Conversion of St. Paul. Lyttleton.

The Truth of the Christian Religion. Alexander Keith. Harper Bros. 1859.

Final Causes. Paul Janet. T. & T. Clark, Edinburgh.

Is Christ Infallible and the Bible True? Hugh McIntosh. T. & T. Clark. 1901.

Six Days of Creation. Taylor Lewis.

Religious Truth Illustrated from Science. E. Hitchcock.

The Fitness of the Holy Scripture for Unfolding the Spiritual Life of Men. Archbishop Trench. 1845.

Moral Difficulties of the Bible. Archdeacon Hessey. 1872. S. P. C. K., London.

Natural Religion. J. R. Seeley. Roberts Bros., Boston. 1882.

Defence and Confirmation of the Faith.

Elliot Lectures. 1885. Funk & Wagnalls Co.

The Difficulties of Infidelity. G. S. Faber. W. Gowans, New York. 1866.

Evidences of Revelation. Edward Thompson. Eaton & Manis. 1872.

Philosophy of Skepticism. Joseph B. Walker. 1857.

Higher Critics and the Monuments. A. H. Sayce. S. P. C. K., London.

Old Farm Fairies. Henry C. McCook. $1.20. Presbyterian Board of Publications.

Tenants of an Old Farm. Ninth edition. Henry C. McCook. $1.20. Presbyterian Board of Publications.

The Gospel in Nature. New edition. Henry C. McCook. $1.00. Presbyterian Board of Publications.

Morals of the Moving Picture Show

A Discussion of this Popular and Growing Amusement from the Standpoint of the Bible

By J. M. STANFIELD
CLEVELAND, TENN.

The moving picture is one of the great inventions of the present day capable of doing great good or harm. It will be used more and more in an educational way, and we welcome it in every legitimate way in which it may be introduced.

I shall endeavor to point out the decidedly evil tendency of the multitude of shows that are using the daily round of syndicate pictures.

I realize the difficulty of proving these shows to be bad—first, because if you are going to prove a thing to be right or wrong you must have something to prove it to, and, second, the lack of a recognized standard by which to judge.

The devil has so completely succeeded in getting the good and bad mixed in the modern picture show, and has gotten almost the entire population of the country (preachers included) into them, until the moral consciousness of those who have endorsed these shows, or formed the habit of attending them, is so weak that it is very difficult to show such people the moral evil resulting from them. But if we can agree on the standard by which moral actions may be judged, it will not be difficult to show the moral standing of the moving picture show.

The business world must have a standard of measure. A dry goods merchant would be condemned for using a yard stick thirty inches long because the standard yard of this country is thirty-six inches. There would be utter chaos in the moral world if each individual were a law to himself. The Bible stands alone and unapproached in the highest civilizations of the world as the standard by which to judge the right or wrong of human actions and conditions. We can follow our own reason or that of the great men of the world, ancient or modern, only so far as they bring us to conclusions in harmony with the Bible. Any belief or conviction of which we are conscious and on which we act that has come to us from any source whatever which conflicts with the Bible is wrong.

Now let us test the ordinary moving picture show by this Bible standard of morals. And most of these Scriptures would apply equally well to the theater, circus, dance, cards and professional baseball.

In Romans 8:9 it is said that if any man have not the Spirit of Christ, or of God, he is none of His. This seems to mean that we must like what God likes and hate that which God hates. Turning to Psalm 5:4-6 we read: "For thou art not a God that hath pleasure in wickedness; neither shall evil dwell with thee. The foolish shall not stand in thy sight; thou hatest all workers of iniquity. Thou shalt destroy them that speak leasing (or lies): the Lord will abhor the bloody and deceitful man." In Ecclesiastes 5:4 it is said that God "hath no pleasure in fools," and in Habakkuk 1:13, "Thou art of purer eyes than to behold evil, and canst not look on iniquity." We read in Proverbs 4:14, 15: "Enter not into the path of the wicked, and go not in the way of evil men. Avoid it, pass not by it, turn from it, and pass away." We are commanded to "abstain from all appearance of evil" in 1 Thessalonians 5:22 and to rejoice "not in iniquity" in 1 Corinthians 13:6. In Proverbs 15:21 we read that "Folly is joy to him that is destitute of wisdom," and in chapter 10:23, "It is as sport to a fool to do mischief," and 14:9 that "Fools make a mock at sin." In 2 Peter 2:14 we read of persons who have "eyes full of adultery." Ham, the son of Noah, must have been a person of this kind, for he and his posterity were cursed because Ham looked upon his drunken father. Christ says, in Matthew 5:28, 29, "That whosoever looketh on a woman to lust after her hath committed adultery with her already in his heart," and that eyes of this kind should be plucked out and cast away. It is a fearful thing to use any members of our body in the wrong way. The eyes are no exception.

The moving picture show under discussion is run for the money there is in it and the value supposed to be given is the recreation, entertainment and amusement the public receives, with scenes of educational value thrown in occasionally. Now keep the above passages of Scripture in mind, and think of what you see and laugh at in the picture show. The drunkard and all sorts of silly, irreverent and immodest dancers and fun-makers are made to furnish amusement. There are domestic quarrels, midnight bed-room scenes, divorce with all its disgraceful causes, elopements and almost everything suggestive of improper relations between the sexes, that the law and the general public will permit. Judged by the billboards, even on the outside, the censorship of the picture show has signally failed. Hideous faces back of pistols, fights and murder scenes are exhibited on every hand.

On the inside you may see Indian butcheries and bull-fights. Men and women are shown plotting and carrying out revenge, they gamble, fight, stab, and shoot each other while you look on. Criminals are made to be heroes, or crime is shown in all its horrors, purporting to teach great moral lessons, but the results in fact are that the young, who witness these things repeatedly, fail to get the right impressions.

A boy about fourteen years old came into my place of business inquiring for some place to steal a peep at the show beneath. I engaged him in a friendly conversation, and he told me some of the pictures he had been seeing. Said he did not care much for the funny pictures, but would rather see the "western" pictures, or those of that class. Then he described one where a beautiful girl was taken from her father's bed-room, the father being sick, revolvers were in evidence, the cowboy taking the girl to some distant depression or cave in the prairie, where a little later the girl was rescued by other cowboys amid the flash of revolvers. The boy showed his interest plainly as he described this scene and ended by saying that it made him want to have a pistol.

At Rev. C. O. Jones' meeting for school children at the M. E. Church South in this place, a few weeks ago, he asked them what they would rather see above everything else. One bright boy answered, "The picture show." Mr. Jones at once asked him if he saw train robberies and men running off with other men's wives. The boy promptly replied, "Yes"; and this boy had been attending the so-called clean shows here in Cleveland. Here is one thing that makes the moving picture show vastly more harmful than the theater. The great number of five-and ten-cent shows run day and night get great crowds of children and young people that the theater did not get. The show holds the children spellbound, the climax is quickly reached without the trouble of reading through a book, as in the dime novel, the impression is deeply made and the child's moral ideals perverted.

A little boy, returning home from his first show, told his mother that if she would go to one show she would never want to go to another prayer-meeting. The boy spoke wiser than he thought. The church services do appear dull after the picture show or theater habit has been established. No wonder choir leaders, singers and other church members who frequent these places demand "ragtime" music in the church and give us those amazing heights and depths of voice tone suggesting theatrical entertainments.

The faithful pastor is feeling this terrible strain on the spiritual life of the church. The picture show and the theater do not encourage sober religious thought, but they unfit a person for serious inward reflection, prayer, Bible reading, and religious exercises of the right kind.

I believe a Christian may go anywhere, if he can take and keep Christianity with him as Christ did, who was and is the Friend of sinners. Paul shows us that we may transact business, even with fornicators, but all such association must be without the least indorsement or compromise with evil, as indicated in the above Scriptures.

To frequent places of sinful amusement for the amusement, or with the excuse that we are compelled to have some recreation, makes us birds of a feather—puts us on the same level as the promoters of the amusement—hence the sin. The Bible tells us that "The joy of the Lord is your strength," and the needed bodily rest or exercise may be taken in innocent ways.

I admit that the picture show puts some really good things into its program occasionally in order to appear decent and cater to all classes. But this is about as inconsistent as it would be to have a saloonkeeper or gambler preach the gospel on Sunday in our churches and then continue his whiskey-selling or gambling through the week.

But the general trend or moving principle back of a thing determines its moral position and not the occasional good things it may do. A vicious animal is as really in the cornfield after having pushed down one panel of the fence as if he had pushed down the entire fence. This is why a man who wilfully and deliberately breaks one commandment is guilty of all. He would have broken any other had it been in the way of his sinful purpose.

Now, in the light of the Scripture passages quoted above, and many others that might be brought to bear, the popular moving picture shows of the present day stand in a very unfavorable light.

I conclude, then, that we stand condemned by the Scriptures when we attend such places as described above, for recreation, entertainment or amusement, and that they are not proper places for instruction.

The Bible Institute Colportage Ass'n, 826 N. La Salle St., Chicago
8 cents a dozen ; 50 cents a hundred
Printed in U. S. A.

Burge n Burd
919 M, 22° 12

Repaired by
Bob Armstrong
February 2013

met

THE MASTER'S COLLEGE
3 3540 00028 7584